REPORT R-199, vol 2.

IDA GROUND-AIR MODEL I (IDAGAM I)

Volume 2:   Definitions of Variables

Lowell Bruce Anderson
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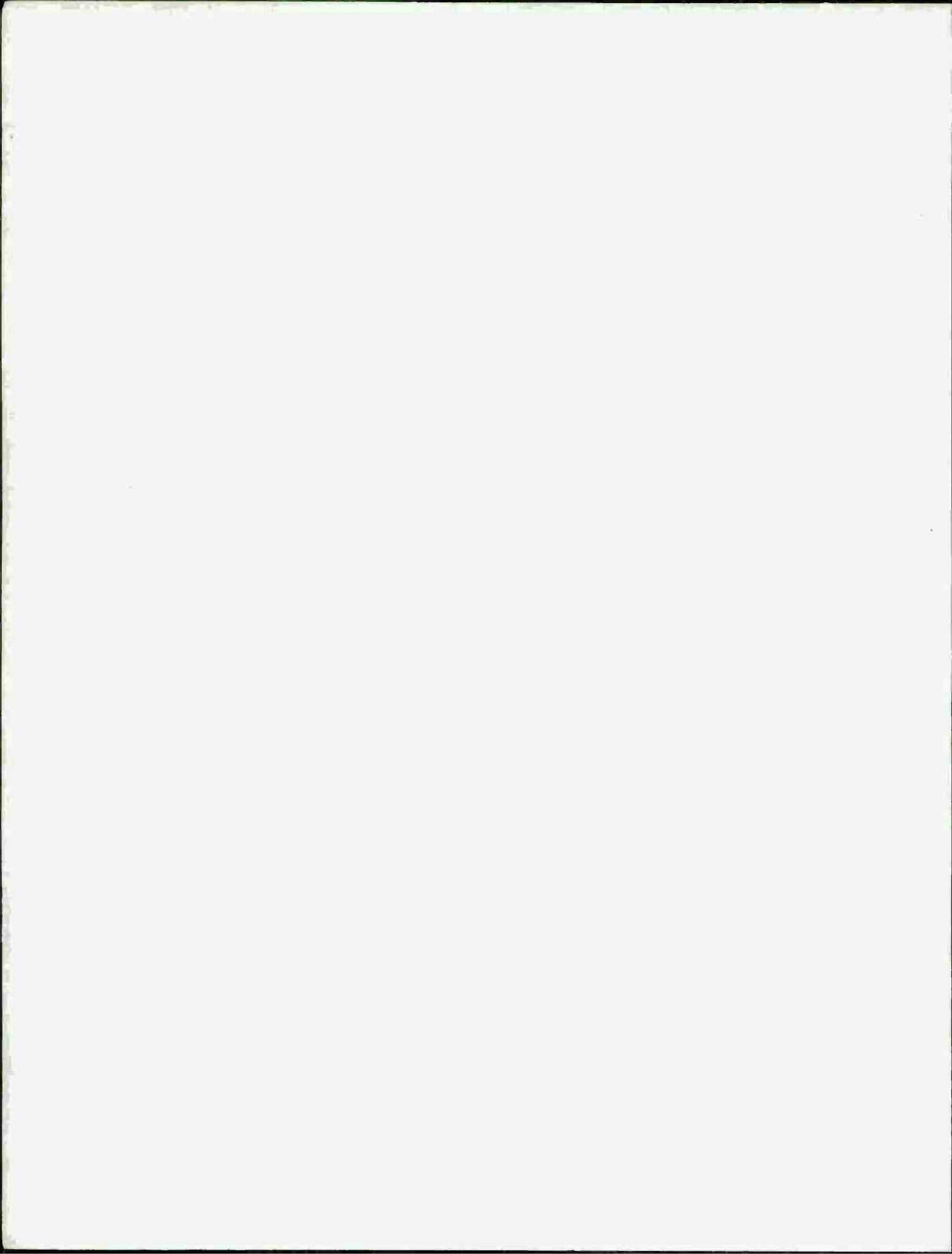Mary J. Hutzler
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The IDA Ground-Air Model I (IDAGAM I) is a deterministic fully-automated, theater-level model of non-nuclear combat between two opposing forces. The report consists of five volumes, as follows: (1) Comprehensive Description, (2) Definitions of Variables, (3) Detailed Description of Selected Portions, (4) Documentation, and (5) Testing (U) (SECRET).

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FOREWORD

IDAGAM I is a deterministic, fully automated model of non-nuclear combat between two opposing forces. The purpose of this report is to describe and document IDAGAM I. The report consists of five volumes, the contents of which are summarized as follows:

Volume 4 - Documentation

Volume 5 - Testing

Volumes 1, 2, 3, and 4 are Unclassified; Volume 5 is Secret.

Since it would be much too unwieldy to include a copy of the code of the IDAGAM I computer program in this report, no such copy is included here. Copies of this code on appropriate media (tape, cards, etc.) can be obtained directly from the Institute for Defense Analyses.

CONTENTS OF VOLUME 2

INTRODUCTION

Definitions of all the variables used in IDAGAM I are con-
tained in this volume, which is, in a sense, a dictionary for
the IDAGAM I computer program (which is documented in Volume 4).
As such, this volume is useful in conjunction with that computer
program or the descriptions of it. Significant effort was made
in developing IDAGAM I so that the IDAGAM I computer program
would be relatively easy to read and follow, provided that the
reader has the definitions given here. Accordingly, this volume
serves two purposes: First, someone interested in either an
extremely detailed knowledge of all of IDAGAM I or a review of
parts of IDAGAM I can, with the assistance of this volume, read
the detailed description of IDAGAM I (in Volume 3) and the com-
puter program itself. Second, this volume serves as a dictionary-
type reference for preparing the inputs and reading the outputs
of IDAGAM I.

The variables are listed alphabetically in Chapter II.
Following the name and definition of each variable, an "I"
appears if the variable is an input, or a "W" appears if the
variable is a working variable.

Input variables can be initially read into the program in
one of six places: MAIN, RCD, RFTZ, RPTZ, RPAC, or MF (these
terms are defined in Chapter I). In addition, each variable
read into the program in RCD, RFTZ, RPTZ, or RPAC has a number
associated with it. This number uniquely identifies all dimen-
sioned variables. However, one or more nondimensioned variables
can be represented by the same number. IDAGAM I prints out the
inputs as they are read in by printing the number and then the

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variable names that the number references. Immediately follow-
ing the variable names, the data for those variables are printed.
When looking for a particular input in the printout, the reader
will find it useful to know where the variable was read into the
program and what its number is (if it has one). Accordingly, at
the end of the definition of each input variable, the place
where that variable is initially read into the program (RCD,
RFTZ, RPTZ, or RPAC) and the number of the variable (if it has
one) are given.

Chapter I gives a one-line description of each overlay and
subroutine used in IDAGAM I.

Chapter I

PROGRAM, OVERLAYS, AND SUBROUTINES

Name	Description	Type
AC	Air-Combat Model.	Primary Overlay
AC1	Air-Combat Model, part 1.	Secondary Overlay
AC2	Air-Combat Model, part 2.	Secondary Overlay
AC3	Air-Combat Model, part 3.	Secondary Overlay
AC4	Air-Combat Model, part 4.	Secondary Overlay
AC5	Air-Combat Model, part 5.	Secondary Overlay
AC6	Air-Combat Model, part 6.	Secondary Overlay
AC7	Air-Combat Model, part 7.	Secondary Overlay
ATTRIT	Attrit targets; this subroutine computes attrition to targets by type (see ATTRIT, Ch. II).	Subroutine
CVFW	Compute the value of the function at W; this subroutine computes values for certain piecewise linear functions (see CVFW, Ch. II).	Subroutine
EIGENV	Compute eigenvalue; this subroutine computes the maximum eigenvalue of a nonnegative matrix (see EIGENV, Ch. II).	Subroutine
GC	Ground-combat model.	Primary Overlay
MAIN	Main control program; this program calls all primary overlays.	Program
MF	Move forces; this subroutine moves forces (divisions) from the COMMZ to regions and sectors, from regions to other regions and sectors, and from sectors to regions and other sectors, according to user input.	Subroutine
MPROD	Matrix product; this subroutine computes the product of two matrices (see MPROD, Ch. II).	Subroutine

Name	Description	Type
PR2	Print routine; this subroutine controls the summary printout.	Subroutine
RCD	Read campaign description; this subroutine reads inputs that describe the theater.	Subroutine
RF	Read forces; this program reads new force increment (ground and air) into the model during the course of the war.	Primary Overlay
RFTZ	Read forces at time zero; this subroutine reads initial ground and air forces into the model.	Subroutine
RP	Read parameters; this subroutine reads new values for parameters (ground and air) into the model during the course of the war.	Subroutine
RPAC	Read parameters for air combat; this subroutine reads initial parameters for the air-combat model.	Subroutine
RPOMF	Read parameters or move forces; this program calls the RP and MF subroutines as appropriate.	Primary Overlay
RPTZ	Read parameters at time zero; this subroutine reads initial parameters for the ground-combat model.	Subroutine
TCTZ	Theater control at time zero; this subroutine computes initial conditions and certain time invariant quantities.	Subroutine
TC1	Theater-control model, part 1.	Primary Overlay
TC2	Theater-control model, part 2.	Primary Overlay
TZERO	Time zero; this program calls the RCD, RFTZ, RPTZ, RPAC, and TCTZ subroutines.	Primary Overlay

Chapter II

DEFINITIONS OF VARIABLES

Variable Name	Definition	Type
A(N,M)	(See MPROD.)	W
AA(KBW,KRW)	Effectiveness matrix (Blue shooting at Red) (see EIGENV).	W
AABMAR(KBAM,KRW)	Actual allocation of Blue type-KBAM air munitions in the attack against Red type-KRW weapons.	W
AABMDR(KBAM,KRW)	Actual allocation of Blue type-KBAM air munitions in the defense against Red type-KRW weapons.	W
AABWAR(KBW,KRW)	Actual allocation of Blue type-KBW weapons on attack against Red type-KRW weapons.	W
AABWDR(KBW,KRW)	Actual allocation of Blue type-KBW weapons on defense against Red type-KRW weapons.	W
AAF	Air-advantage factor (to be redefined for different types of attacks).	W
AARMAB(KRAM,KBW)	Actual allocation of Red type-KRAM air munitions on attack against Blue type-KBW weapons.	W
AARMDB(KRAM,KBW)	Actual allocation of Red type-KRAM air munitions on defense against Blue type-KBW weapons.	W
AARWAB(KRW,KBW)	Actual allocation of Red type-KRW weapons on attack against Blue type-KBW weapons.	W
AARWDB(KRW,KBW)	Actual allocation of Red type-KRW weapons on defense against Blue type-KBW weapons.	W
ABPLDS(KBP,KBD)	Additional Blue type-KBP people lost in type-KBD divisions in sector (i.e., excess due to not allocating the EBTPLS casualties).	W
ABRFBA	Air Blue-over-Red force ratio for Blue on attack. (RPAC,8288)	I

Variable Name	Definition	Type
ABRFRD	Air Blue-over-Red force ratio for Red on defense (if the force ratio in the sector is below this force ratio, Red will send CAS missions to that sector instead of sending them to the sector in which Red is doing the worst). (RPAC,8289).	I
ALAM	Variable used for the inverse of the square root of the eigenvalue computed in EIGENV.	W
ALAM1	Variable used to store the previous iteration of ALAM (see EIGENV).	W
APA1	Additional percent of aircraft assigned to CASE missions.	W
APK	Average probability of kill.	W
ARBFBD	Air Red-over-Blue force ratio for Blue on defense (if the force ratio in the sector is below this force ratio, Blue will send CAS missions to that sector instead of sending them to the sector in which Blue is doing the worst). (RPAC,8289).	I
ARBFRA	Air Red-over-Blue force ratio for Red on attack. (RPAC,8288)	I
ARPLDS(KRP,KRD)	Additional Red type-KRP people lost in type-KRD divisions in the sector (i.e., excess due to not allocating the ERTPLS casualties).	W
ASAM	Indicator for total number of SAMs $$= \begin{cases} 1.0, & \text{if } T_R^B \text{ SAM} \geq 1.0; \\ 0.0, & \text{if } T_R^B \text{ SAM} < 1.0. \end{cases}$$	W
ATTRIT	Not a variable, this is a separate small subroutine that computes by type the expected fraction of targets killed (EFK) as a function of the total number of targets (T), the number of shooters by type $(S(I),I=1,\ldots,M)$, detection (D) and kill (PK) probabilities, and an index (IAF) that specifies the form of the equation used to compute this expected fractional attrition.	W
AVA	Air value available.	W
AWVSRR	Attack weapons value in sector receiving reserves-- i.e., BAWVS(JRR) or RAWVS(JRR).	W

Variable Name	Definition	Type
B(J,L)	(See MPROD.)	W
BAANSA	Blue aircraft attacking Red nonsheltered aircraft.	W
BAARNS	Blue aircraft that attack each Red nonsheltered aircraft before any Blue aircraft attack shelters. (RPAC,8298)	I
BACA(KBA,J)	Blue type-KBA aircraft on CAS missions in sector J.	W
BACAK(KBA,J)	Blue type-KBA aircraft killed on CAS missions in sector J.	W
BACD(KBA,IB)	Blue type-KBA aircraft on BD missions in region IB.	W
BACDK(KBA,IB)	Blue type-KBA aircraft killed on BD missions in region IB.	W
BACE(KBA,IR)	Blue type-KBA aircraft on CASE missions in region IR.	W
BACEK(KBA,IR)	Blue type-KBA aircraft killed on CASE missions in region IR.	W
BACG(KBA,J)	Blue type-KBA aircraft on CAS AAA-suppression missions in sector J.	W
BACGK(KBA,J)	Blue type-KBA aircraft killed on CAS AAA-suppression missions in sector J.	W
BACS(KBA,J)	Blue type-KBA aircraft on CAS SAM-suppression missions in sector J.	W
BACSK(KBA,J)	Blue type-KBA aircraft killed on CAS SAM-suppression missions in sector J.	W
BAEFX(IBAEF)	(See NBAEF.) (RPTZ,8005)	I
BAEFY(KBD,IBAEF)	(See NBAEF.) (RPTZ,8010)	I
BAEFYS(IBAEF)	Section of BAEFY(KBD,IBAEF) for the KBD under consideration.	W
BAFA(KBA,IR)	Blue type-KBA aircraft sent to forward-region IR on ABA missions.	W
BAFAK(KBA,IR)	Blue type-KBA aircraft killed that were sent to forward-region IR on ABA missions.	W

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Variable Name	Definition	Type
BAFAT(KBA,IR)	Temporary value for Blue type-KBA aircraft on ABA missions in Red forward-region IR.	W
BAFD(KBA,IR)	Blue type-KBA aircraft sent to forward-region IB on ABD missions.	W
BAFDK(KBA,IB)	Blue type-KBA aircraft killed that were sent to forward-region IB on ABD missions.	W
BAFE(KBA,IR)	Blue type-KBA aircraft sent to forward-region IR on ABAE missions.	W
BAFEK(KBA,IR)	Blue type-KBA aircraft killed that were sent to forward-region IR on ABAE missions.	W
BAFG(KBA,IR)	Blue type-KBA aircraft sent to forward-region IR on ABA AAA-suppression missions.	W
BAFGK(KBA,IR)	Blue type-KBA aircraft killed that were sent to forward-region IR on ABA AAA-suppression missions.	W
BAFR(KBA,IB)	Blue type-KBA aircraft in forward-region IB. (RFTZ, 1150)	I
BAFRCA	Weighted number of Blue aircraft facing Red at which Red flies CAS (instead of ABA) missions (at or below this value, Red will fly CAS missions only). (RPAC,8294)	I
BAFRN(IB)	Blue aircraft in forward-region IB that were not sheltered.	W
BAFRNK(IB)	Blue aircraft in forward-region IB that were not sheltered and were killed.	W
BAFRS(IB)	Blue aircraft in forward-region IB that were sheltered.	W
BAFRSK(IB)	Blue aircraft in forward-region IB that were sheltered and were killed.	W
BAFS(KBA,IR)	Blue type-KBA aircraft sent to Red forward-region IR on ABA SAM-suppression missions.	W
BAFSK(KBA,IR)	Blue type-KBA aircraft killed that were sent to Red forward-region IR on ABA SAM-suppression missions.	W
BAGFR(IB)	Blue AAA in forward-region IB. (RFTZ,1135)	I
BAGFRK(IB)	Blue AAA in forward-region IB that are killed. (RFTZ, 1135)	W

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Variable Name	Definition	Type
BAGRR(IB)	Blue AAA in rear-region IB. (RFTZ,1140)	I
BAGRRK(IB)	Blue AAA in rear-region IB that are killed.	W
BAGZ	Blue AAA in COMMZ. (RFTZ,1145)	I
BAGZK	Blue AAA in COMMZ that are killed.	W
BAIDR(KBA,IR)	Blue type-KBA aircraft sent to Red region IR on IDR missions.	W
BAIDRK(KBA,IR)	Blue type-KBA aircraft killed that were sent to Red region IR on IDR missions.	W
BAIDRT(KBA,IR)	Temporary value for Blue type-KBA aircraft on IDR missions sent to Red region IR.	W
BAISR(KBA,IR)	Blue type-KBA aircraft on supply-interdiction missions in region IR.	W
BAKRP(KBA)	Scoreboard for Blue type-KBA aircraft killing Red people.	W
BAKRS(KBA,KRW)	Scoreboard for Blue type-KBA aircraft killing Red type-KRW weapons.	W
BALBD(KBD)	Balance factor relating Blue combat personnel to total Blue personnel. (RPTZ,3265)	I
BALRD(KRD)	Balance factor relating Red combat personnel to total Red personnel. (RPTZ,3266)	I
BAMKAR(KBAM,KRW)	Actual number of Red type-KRW ground weapons killed by each Blue type-KBAM air munition if it were fired at Red type-KRW weapons from Blue aircraft on IDR missions. (RPTZ,3246)	I
BAMNLA(KBA,KBAM)	Blue type-KBAM air munition in a notional load carried by a Blue type-KBA aircraft when Blue is on attack. (RPTZ,3250)	I
BAMNLD(KBA,KBAM)	Amount of Blue type-KBAM munition in a notional load carried by a Blue type-KBA aircraft when Blue is on defense. (RPTZ,3251)	I
BAPE	Blue attack percent effectiveness.	W
BAPEDS	Blue attack percent effectiveness of a type of division in the sector.	W

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Variable Name	Definition	Type
BARA(KBA,IR)	Blue type-KBA aircraft sent to Red rear-region IR on ABA missions.	W
BARAK(KBA,IR)	Blue type-KBA aircraft killed that were sent to Red rear-region IR on ABA missions.	W
BARAT(KBA,IR)	Temporary value for Blue type-KBA aircraft on ABA missions in Red rear-region IR.	W
BARD(KBA,IB)	Blue type-KBA aircraft in Blue rear-region IB on ABD missions.	W
BARDK(KBA,IB)	Blue type-KBA aircraft killed that were sent to Blue rear-region IB on ABD missions.	W
BARE(KBA,IR)	Blue type-KBA aircraft sent to Red rear-region IR on ABAE missions.	W
BAREK(KBA,IR)	Blue type-KBA aircraft killed that were sent to Red rear-region IR on ABAE missions.	W
BARG(KBA,IR)	Blue type-KBA aircraft sent to Red rear-region IR on ABA AAA-suppression missions.	W
BARGK(KBA,IR)	Blue type-KBA aircraft killed that were sent to Red rear-region IR on ABA AAA-suppression missions.	W
BARR(KBA,IB)	Blue type-KBA aircraft in rear-region IB. (RFTZ,1160)	I
BARRN(IB)	Blue aircraft in rear-region IB that are not sheltered.	W
BARRNK(IB)	Blue aircraft in rear-region IB that are not sheltered and are killed.	W
BARRS(IB)	Blue aircraft in rear-region IB that are not sheltered.	W
BARRSK(IB)	Blue aircraft in rear-region IB that are sheltered and are killed.	W
BARS(KBA,IR)	Blue type-KBA aircraft sent to Red rear-region IR on ABA SAM-suppression missions.	W
BARSK(KBA,IR)	Blue type-KBA aircraft killed that were sent to Red rear-region IR on ABA SAM-suppression missions.	W
BAS(KBA,J)	Blue type-KBA aircraft that are contributing to CAS missions in sector J.	W

Variable Name	Definition	Type
BASHT(KBA)	Blue aircraft sheltered according to priority type-KBA sheltering.	W
BAWVDZ	Blue (attack) weapons value of one division, of a particular type, in COMMZ.	W
BAWVS(J)	Blue (attack) weapons value in sector J.	W
BAWVSR	Blue (attack) weapons values in all sectors and regions.	W
BAWVT	Blue (attack) weapons value in theater; total value assuming posture KP = 1.	W
BAWVZ	Blue (attack) weapons values in COMMZ.	W
BAZ(KBA)	Blue type-KBA aircraft in COMMZ. (RFTZ,1170)	I
BAZA(KBA)	Blue type-KBA aircraft sent to Red COMMZ on ABA missions.	W
BAZAK(KBA)	Blue type-KBA aircraft killed that were sent to Red COMMZ on ABA missions.	W
BAZAT(KBA)	Temporary value for Blue type-KBA aircraft sent on ABA missions in Red COMMZ.	W
BAZD(KBA)	Blue type-KBA aircraft sent to Red COMMZ on ABD missions.	W
BAZDK(KBA)	Blue type-KBA aircraft killed that were sent to Red COMMZ on ABD missions.	W
BAZE(KBA)	Blue type-KBA aircraft sent to Red COMMZ on ABAE missions.	W
BAZEK(KBA)	Blue type-KBA aircraft killed that were sent to Red COMMZ on ABAE missions.	W
BAZG(KBA)	Blue type-KBA aircraft sent to Red COMMZ on ABA AAA-suppression missions.	W
BAZGK(KBA)	Blue type-KBA aircraft killed that were sent to Red COMMZ on ABA AAA-suppression missions.	W
BAZN	Blue aircraft in COMMZ that are not sheltered.	W
BAZNK	Blue aircraft that are not sheltered and are killed.	W
BAZS(KBA)	Blue type-KBA aircraft sent to Red COMMZ on ABA SAM-suppression missions.	W
BAZSH	Blue aircraft in COMMZ that are sheltered.	W

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Variable Name	Definition	Type
BAZSHK	Blue aircraft in COMMZ that are sheltered and are killed.	W
BAZSK(KBA)	Blue type-KBA aircraft killed that were sent to Red COMMZ on ABA SAM-suppression missions.	W
BB(KRW,KBW)	Effectiveness matrix (Red shooting at Blue) (see EIGENV).	W
BBCP	"Balanced" Blue combat personnel.	W
BCR(IB)	Blue casualties in region IB due to IDR missions.	W
BCRPH(KBP)	Blue consumption rate for type-KBP people in a holding posture. (RPTZ,3600)	I
BCRPP(KBP,KP)	Blue consumption rate for type-KBP people in posture KP. (RPTZ,3610)	I
BCRPR(KBP)	Blue consumption rate for type-KBP people in the regions. (RPTZ,3450)	I
BCRRPZ	Blue consumption rate for replacement people in COMMZ. (RPTZ,3550)	I
BCRRWZ(KBW)	Blue consumption rate for replacement type-KBW weapons in COMMZ. (RPTZ,3570)	I
BCRSPZ	Blue consumption rate for support personnel in COMMZ. (RPTZ,3530)	I
BCRW(KBW)	Blue consumption rate for type-KBW weapons.	W
BCRWH(KBW)	Blue consumption rate for type-KBW weapons in holding posture. (RPTZ,3620)	I
BCRWP(KBW,KP)	Blue consumption rate for type-KBW weapons in posture KP. (RPTZ,3630)	I
BCRWR(KBW)	Blue consumption rate for type-KBW weapons in reserve. (RPTZ,3470)	I
BCS(J)	Blue casualties in sector $J = \sum\limits_{KBP} BPLS(KBP,J)$.	W
BCWI(KBW)	Index for Blue weapons. $= \begin{cases} 1.0, \text{ if KBW is a "combat" weapon;} \\ 0.0, \text{ if KBW is a "combat support" weapon.} \end{cases}$ (RPTZ,3290)	I

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Variable Name	Definition	Type
BDAD(L)	Blue detection probability by attackers of Red defenders, given L. (RPAC,8238)	I
BDAN	Blue detection probability by ABA-attackers of Red nonshelters. (RPAC,8242)	I
BDAS	Blue detection probability by ABA-attackers of Red shelters. (RPAC,8242)	I
BDDAC(L)	Blue detection probability by defenders defending combat sector of Red attackers, given L. (RPAC, 8330)	I
BDDAF(L)	Blue detection probability by defenders defending in forward region of Red attackers, given L. (RPAC,8331)	I
BDDAR(L)	Blue detection probability by defenders defending in rear region of Red attackers, given L. (RPAC, 8332)	I
BDDAZ(L)	Blue detection probability by defenders defending in COMMZ of Red attackers, given L. (RPAC,8333)	I
BDDEC(L)	Blue detection probability by defenders defending combat sector of Red escorts, given L. (RPAC, 8236)	I
BDDEF(L)	Blue detection probability by defenders defending in forward region of Red escorts, given L. (RPAC, 8237)	I
BDDER(L)	Blue detection probability by defenders defending in rear region of Red escorts, given L. (RPAC, 8239)	I
BDDEZ(L)	Blue detection probability by defenders defending in COMMZ of Red escorts, given L. (RPAC,8240)	I
BDED(L)	Blue detection probability by escorts of Red defenders, given L. (RPAC,8235)	I
BDEFX(IBDEF)	(See NBDEF.) (RPTZ,8020)	I
BDEFY(KBD,IBDEF)	(See NBDEF.) (RPTZ,8025)	I
BDEFYS(IBDEF)	Section of BDEFY(KBD,IBDEF) for the KBD under consideration.	W

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Variable Name	Definition	Type
BDGC(L)	Blue detection probability by AAA in combat sector, given L. (RPAC,8338)	I
BDGF(L)	Blue detection probability by AAA in forward region, given L. (RPAC,8339)	I
BDGG	Blue detection probability by AAA-suppressors of Red AAA. (RPAC,8241)	I
BDGR(L)	Blue detection probability by AAA in rear region, given L. (RPAC,8340)	I
BDGZ(L)	Blue detection probability by AAA in COMMZ, given L. (RPAC,8341)	I
BDPE	Blue defense percent effectiveness.	W
BDPEDS	Blue defense percent effectiveness of a type of division in the sector.	W
BDSC(L)	Blue detection probability by SAMs in combat sector, given L. (RPAC,8334)	I
BDSF(L)	Blue detection probability by SAMs in forward region, given L. (RPAC,8335)	I
BDSR(L)	Blue detection probability by SAMs in rear region, given L. (RPAC,8336)	I
BDSRDR	Blue days of supply in region for divisions in region. (RPTZ,2430)	I
BDSRDS	Blue days of supply in region for divisions in sector. (RPTZ,2420)	I
BDSRPZ	Blue days of supply for replacement people in COMMZ. (RPTZ,2480)	I
BDSRWZ	Blue days of supply for replacement weapons in COMMZ. (RPTZ,2490)	I
BDSS	Detection probability by Blue SAM-suppression of Red SAMs. (RPAC,8241)	I
BDSSDS	Blue days of supply in sector for divisions in sector. (RPTZ,2410)	I
BDSSPZ	Blue days of supply for support personnel in COMMZ. (RPTZ,2470)	I

Variable Name	Definition	Type
BDSZ(L)	Blue detection probability by SAMs in COMMZ, given L. (RPAC,8337)	I
BDSZDR	Blue days of supply in COMMZ for divisions in region. (RPTZ,2450)	I
BDSZDS	Blue days of supply in COMMZ for divisions in sector. (RPTZ,2440)	I
BDSZDZ	Blue days of supply in COMMZ for divisions in COMMZ. (RPTZ,2460)	I
BDWVDZ	Blue (defense) weapons value in one particular division in the COMMZ.	W
BDWVS(J)	Blue (defense) weapons value in sector J.	W
BDWVSR	Blue (defense) weapons value in all sectors and regions.	W
BDWVT	Blue (defense) weapons value in theater total.	W
BDWVZ	Blue (defense) weapons value in COMMZ.	W
BFMFX(IBFMF)	(See NBFMF.) (RPTZ,8125)	I
BFMFY(KP,KT,IBFMF)	(See NBFMF.) (RPTZ,8130)	I
BFMFYS(IBFMF)	Section of BFMFY(KP,KT,IBFMF) for the KP,KT under consideration.	W
BFWFSP(J,KP)	Blue-over-Red force ratio above which Blue (on attack) withdraws divisions from sector J, provided that J is a sector of main attack and is constrained by front-to-flank ratio and is in posture KP. (RPTZ,3715)	I
BGKRP(KBW)	Scoreboard for Blue type-KBW ground weapons killing Red people.	W
BGKRS(KBW,KRW)	Scoreboard for Blue type-KBW ground weapons killing Red type-KRW weapons.	W
BGS(J)	Blue AAA in sector J.	W
BGSK(J)	Blue AAA in sector J killed.	W
BGSR(IB)	Blue general supplies in region IB. (RFTZ,1240)	I

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Variable Name	Definition	Type
BGSRUR(IB)	Blue general supplies in region IB for use in region IB. (RFTZ,1245)	I
BGSS(J)	Blue general supplies in sector J. (RFTZ,1230)	I
BGSSR(IB)	Blue general supply shortage in region IB.	W
BGSSS(J)	Blue general supply shortage in sector J.	W
BGSSZ	Blue general supply shortage in COMMZ.	W
BGSZ	Blue general supplies in COMMZ. (RFTZ,1250)	I
BGSZUZ	Blue general supplies in COMMZ for use in COMMZ. (RFTZ,1255)	I
BKAD(KBA,KRA)	Probability that a Blue type-KBA attacker kills a Red type-KRA defender. (RPAC,8258)	I
BKAN(KBA)	Probability that a Blue type-KBA attacker kills Red nonsheltered aircraft. (RPAC,8264)	I
BKAS(KBA)	Probability that a Blue type-KBA ABA-attacker kills Red sheltered aircraft. (RPAC,8263)	I
BKDA(KBA,KRA)	Probability that a Blue type-KBA defender kills a Red type-KRA attacker. (RPAC,8257)	I
BKDE(KBA,KRA)	Probability that a Blue type-KBA defender kills a Red type-KRA escort. (RPAC,8256)	I
BKED(KBA,KRA)	Probability that a Blue type-KBA escort kills a Red type-KRA defender. (RPAC,8255)	I
BKG(KRA)	Probability that a Blue AAA kills a Red type-KRA aircraft. (RPAC,8260)	I
BKGG(KBA)	Probability that a Blue type-KBA AAA-suppressor kills a Red AAA. (RPAC,8262)	I
BKS(KRA)	Probability that a Blue SAM kills a Red type-KRA aircraft. (RPAC,8259)	I
BKSS(KBA)	Probability that a Blue type-KBA SAM-suppressor kills a Red SAM. (RPAC,8261)	I
BMABAS	Blue minimum number of ABA sorties before flying suppression. (RPAC,8281)	I

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Variable Name	Definition	Type
BMCASS	Blue minimum number of CAS sorties before flying suppression. (RPAC,8280)	I
BMFAS(J)	Blue minimum front for air support in sector J. (RPTZ,3346)	I
BMFDPT(KBD,KP,KT)	Blue mobility factor for a type-KBD division attacking in posture KP, in terrain KT (needed only if MCBM = 2, 3, or 4). (RPTZ,3330)	I

BMFS — Blue mobility factor in the sector — W

$$
BMFS = \begin{cases}
1.0, & \text{if } MCBM = 1; \\[1mm]
\min_{KBD} \{BMFDPT(KBD,KP,KT) \mid NBDS(KBD,J) > 0\}, & \text{if } MCBM = 2; \\[1mm]
\max_{KBD} \{BMFDPT(KBD,KP,KT) \mid NBDS(KBD,J) > 0\}, & \text{if } MCBM = 3; \\[1mm]
\sum_{KBD=1}^{NKBD} \dfrac{BMFDPT(KBD,KP,KT) * NBDS(KBD,J) * PNBD(KBD)}{BTDS}, & \text{if } MCBM = 4.
\end{cases}
$$

Variable Name	Definition	Type
BMRSKA(KBD)	Blue minimum reinforcement strength for type-KBD division on attack. (RPTZ,3675)	I
BMRSDD(KBD)	Blue minimum reinforcement strength for type-KBD division on defense. (RPTZ,3680)	I
BMSPSA	Blue maximum number of SAM-suppression sorties per SAM (ABA mission). (RPAC,8283)	I
BMSPSC	Blue maximum number of SAM-suppression sorties per SAM (CAS mission). (RPAC,8282)	I
BNDID(INTS,J)	The interval boundary between interval INT and INT+1 in sector J. (RPTZ,2320)	I
BPARS	Total of actual Blue people in regions and sectors.	W
BPCRPR(KBP)	Blue planned consumption rate for type-KBP people in reserve. (RPTZ,7050)	I
BPCRPS(KBP)	Blue planned consumption rate for type-KBP people in sector. (RPTZ,7010)	I
BPCRRP	Blue planned consumption rate for replacement people. (RPTZ,7100)	I

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Variable Name	Definition	Type
BPCRRW(KBW)	Blue planned consumption rate for type-KBW replacement weapons. (RPTZ,7110)	I
BPCRSP	Blue planned consumption rate for support people. (RPTZ,7090)	I
BPCRWR(KBW)	Blue planned consumption rate for type-KBW weapons in reserve. (RPTZ,7070)	I
BPCRWS(KBW)	Blue planned consumption rate for type-KBW weapons in sector. (RPTZ,7030)	I
BPDR(KBP,KBD,IB)	Blue type-KBP people in type-KBD divisions in region IB. (RFTZ,1070)	I
BPDS(KBP,KBD,J)	Blue type-KBP people in type-KBD divisions in sector J. (RFTZ,1060)	I
BPDZ(KBP,KBD)	Blue type-KBP people in type-KBD divisions in COMMZ. (RFTZ,1080)	I
BPLDS(KBP,KBD)	Blue people lost in division and sector.	W
BPP	Percent Blue personnel strength (total actual over total TOE).	W
BPWLA(KBW)	Total Blue people lost for each Blue type-KBW weapon lost while Blue is on attack.	W
BPWLAM(KBW,KRAM)	Blue personnel lost when a type-KRAM air munition kills a type-KBW Blue Weapon while Blue is on attack. (RPTZ,3360)	I
BPWLAW(KBW,KRW)	Blue personnel lost when a Red type-KRW weapon kills a Blue type-KBW weapon while Blue is on attack. (RPTZ,3380)	I
BPWLD(KBW)	Total Blue people lost for each Blue type-KBW weapon lost while Blue is on defense.	W
BPWLDM(KBW,KRAM)	Blue personnel lost when a type-KRAM air munition kills a Blue type-KBW weapon for Blue on defense. (RPTZ,3370)	I
BPWLDS(KBW,KBD)	Total Blue people lost for each Blue type-KBW weapon lost in a type-KBD division in the sector.	W

Variable Name	Definition	Type
BPWLDW(KBW,KRW)	Blue personnel lost when a Red type-KRW weapon kills a Blue type-KBW weapon while Blue is on defense. (RPTZ,3390)	I
BRARS	Blue replacements available to be assigned to all regions and sectors.	W
BRCP	"Balanced" Red combat personnel.	W
BRDR(KBD,IB)	Blue replacements sent to all type-KBD divisions in region IB.	W
BRDS(KBD,J)	Blue replacements sent to all type-KBD divisions in sector J.	W
BRLZ	Blue desired reserve level in COMMZ.	W
BRLZAI(IBRL)	Blue desired reserve level in COMMZ if FEBA is in interval IBRL and Blue is on attack. (RPTZ,3800)	I
BRLZDI(IBRL)	Blue desired reserve level in COMMZ if FEBA is in interval IBRL and Blue is on defense. (RPTZ,3810)	I
BRPDR(KBP,KBD,IB)	Blue type-KBP replacement people for all type-KBD divisions in region IB.	W
BRPDS(KBP,KBD,J)	Blue type-KBP replacement people for all type-KBD divisions in sector J.	W
BRPF	Blue replacement pipeline factor. (RPTZ,5010)	I
BRPZ	Blue replacement people in COMMZ. (RFTZ,1180)	I
BRRAD(KBD)	Blue reorganization rate when Blue is on attack for type-KBD divisions. (RPTZ,6090)	I
BRRDD(KBD)	Blue reorganization rate when Blue is on defense for type-KBD divisions. (RPTZ,7000)	I
BRWDR(KBW,KBD,IB)	Blue type-KBW replacement weapons for all type-KBD divisions in region IB.	W
BRWDS(KBW,KBD,J)	Blue type-KBW replacement weapons for all type-KBD divisions in sector J.	W
BRWN(KBW)	Blue type-KBW replacement weapons that are needed.	W
BRWR(KBW)	Blue type-KBW weapons that have been retrieved and are repairable.	W

Variable Name	Definition	Type
BRWRZT(KBW)	Blue type-KBW replacement weapons remaining in COMMZ pool after trial allocation.	W
BRWZ(KBW)	Blue type-KBW replacement weapons in COMMZ. (RFTZ, 1190)	I
BSA	Minimum of Blue shelters or aircraft.	W
BSAFR(IB)	Blue shelters for aircraft in forward-region IB.	W
BSAFRD(IB)	Blue shelters for aircraft in forward-region IB destroyed.	W
BSAMFR(IB)	Blue SAMs in forward-region IB. (RFTZ,1115)	I
BSAMRR(IB)	Blue SAMs in rear-region IB. (RFTZ,1120)	I
BSAMZ	Blue SAMs in COMMZ. (RFTZ,1125)	I
BSAMZK	Blue SAMs in COMMZ killed.	W
BSARF(IB,IFPBS)	Blue shelters for aircraft in region IB by FEBA position. (RFTZ,1172)	I
BSARR(IB)	Blue shelters for aircraft in rear-region IB.	W
BSARRD(IB)	Blue shelters for aircraft in rear-region IB destroyed.	W
BSAZ	Blue shelters for aircraft in COMMZ.	W
BSAZD	Blue shelters for aircraft in COMMZ destroyed.	W
BSCA(KBA)	Blue supplies consumed per type-KBA aircraft per day (in tons). (RPAC,8295)	I
BSD	Blue supply demand.	W
BSFR(IB)	Blue SAMs in forward-region IB $= \mathrm{BSAMFR(IB)} + \sum_{KBD} \mathrm{BWDR(NKBW,KBD,IB)}$.	W
BSFRAK(KRA)	Average number of Blue SAMs fired for each Red type-KRA aircraft killed. (RPAC,8275)	I
BSFRK(IB)	Blue SAMs in forward-region IB killed.	W

Variable Name	Definition	Type
BSLRAC(KRA)	Blue supplies lost (in sector) for each sortie of a Red type-KRA aircraft on CAS attack. (RPTZ,3725)	I
BSLRWV(KRW)	Blue supplies lost for each Red type-KRW weapon in the battle. (RPTZ,3730)	I
BSPZ	Blue people in support activities in COMMZ. (RFTZ, 1175)	I
BSRASI(KRA)	Blue supplies lost (en route to sector) for each sortie of a Red type-KRA aircraft on supply interdiction. (RPTZ,3750)	I
BSRASR(KRA)	Blue supplies lost for each sortie of a Red type-KRA aircraft on supply interdiction in regions. (RPTZ,3752)	I
BSRRK(IB)	Blue SAMs in rear-region IB killed.	W
BSS(J)	Blue SAMs in combat sector J.	W
BSSK(J)	Blue SAMs in combat sector J killed.	W
BSUM(IADDR)	One dimensional array used to transfer between subroutines the two-dimensional arrays PBAKRP(KP,KBW,KRW) and PBDKRP(KP,KBW,KRW)--for fixed KP.	W
BTDS	Total weighted number of Blue divisions in the sector. $$= \begin{cases} \sum_{KBD=1}^{NKBD} NBDS(KBD,J) * PNBD(KBD), & \text{if } MCBM = 4; \\ 0, & \text{otherwise.} \end{cases}$$	W
BTPDS	Present total of Blue people in all type-KBD divisions in the sector.	W
BTPRDR(KBD,IB)	Total Blue people and replacements in all type-KBD divisions in region IB.	W
BTPRDS(KBD,J)	Total Blue people and replacements in all type-KBD divisions in sector J.	W
BWADR(KBW,KBD,IB)	Blue type-KBW weapons available to type-KBD divisions in region IB.	W
BWADS(KBW,KBD,J)	Blue type-KBW weapons available to type-KBD divisions in sector J.	W

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Variable Name	Definition	Type
BWANDR(KBW,KBD,IB)	Blue type-KBW weapons available and needed by type-KBD divisions in region IB.	W
BWANDS(KBW,KBD,J)	Blue type-KBW weapons available and needed by type-KBD divisions in sector J.	W
BWDR(KBW,KBD,IB)	Blue type-KBW weapons in type-KBD divisions in region IB. (RFTZ,1100)	I
BWDS(KBW,KBD,J)	Actual Blue type-KBW weapons in all type-KBD divisions in sector J. (RFTZ,1090)	W
BWDZ(KBW,KBD)	Blue type-KBW weapons in type-KBD divisions in COMMZ. (RFTZ,1110)	I
BWGPG(KKBW,KBW)	Number of Blue type-KKBW weapons in Group 1 or Group 2 required to protect a Blue type-KBW weapon in Group 2 or Group 3. (RPTZ,3260).	I
BWLDS(KBW,KBD)	Blue type-KBW weapons lost in type-KBD divisions in the sector.	W
BWLR(KBW,IB)	Blue type-KBW weapons lost in region IB due to IDR missions.	W
BWLS(KBW)	Blue type-KBW weapons lost.	W
BWNDR(KBW,KBD,IB)	Blue type-KBW weapons still needed by type-KBD divisions in region IB.	W
BWNDS(KBW,KBD,J)	Blue type-KBW weapons still needed by type-KBD divisions in sector J.	W
BWNT(KBW)	Blue type-KBW weapons still needed after trial allocation.	W
BWRRDR(KBW,KBD,IB)	Blue weapon-replacement rate for type-KBW weapons in type-KBD division in region IB.	W
BWRRDS(KBW,KBD,J)	Blue weapon-replacement rate for type-KBW weapons in type-KBD division in sector J.	W
BWS(KBW)	Actual number of Blue type-KBW weapons in the sector.	W
BWVDS	Blue weapons value in all type-KBD divisions in the sector.	W

Variable Name	Definition	Type
CABRPZ	Cumulative additional Blue replacement people in COMMZ (value initially set equal to zero).	W
CABRWZ(KBW)	Cumulative additional Blue type-KBW replacement weapons in COMMZ.	W
CARRPZ	Cumulative additional Red replacement people in COMMZ.	W
CARRWZ(KRW)	Cumulative additional Red replacement type-KRW weapons in COMMZ.	W
CBAKM(M,KBA)	Cumulative Blue type-KBA aircraft killed on mission M.	W
CBAKRP(KBA)	Scoreboard for cumulative Red people killed by Blue type-KBA aircraft.	W
CBAKRS(KBA,KRW)	Scoreboard for cumulative Red type-KRW ground weapons killed by Blue type-KBA aircraft.	W
CBAKM(M,KBA)	Cumulative Blue type-KBA aircraft killed on mission M.	W
CBANK	Cumulative Blue aircraft that are not sheltered and are killed.	W
CBAS(KBA)	Cumulative Blue type-KBA aircraft in all sectors (dimensioned to aircraft-days).	W
CBASK	Cumulative Blue aircraft that are sheltered and are killed.	W
CBC	Cumulative Blue casualties.	W
CBCRI	Cumulative Blue casualties in all regions due to IDR missions.	W
CBCS(J)	Cumulative Blue casualties in sector J.	W
CBGKRP(KBW)	Scoreboard for cumulative Red people killed by Blue type-KBW ground weapons.	W
CBGKRS(KBW,KRW)	Scoreboard for cumulative Red type-KRW weapons killed by Blue type-KBW ground weapons.	W
CBGL	Cumulative Blue AAA lost (in sectors, forward regions, rear regions, and COMMZ due to air combat only).	W

Variable Name	Definition	Type
CBNBC	Cumulative Blue nonbattle casualties (including mines).	W
CBNBCM	Cumulative Blue nonbattle casualties due to mines.	W
CBPC	Cumulative Blue percent casualties.	W
CBPCS(J)	Cumulative Blue percent casualties in sector J.	W
CBPS	Cumulative Blue people of all types in all divisions in all sectors (dimensioned to people-days).	W
CBSAD	Cumulative Blue shelters for aircraft destroyed.	W
CBSFM(M,KBA)	Cumulative Blue type-KBA sorties flown on mission M.	W
CBSLI	Cumulative Blue supplies lost en route to sector due to interdiction.	W
CBSML	Cumulative Blue SAMs lost (in sectors, forward regions, rear regions, and COMMZ due to air combat only).	W
CBWL(KBW)	Cumulative Blue type-KBW weapons lost.	W
CBWLIR(KBW)	Cumulative Blue type-KBW weapons lost on IDR missions in all regions.	W
CBWLS(KBW,J)	Cumulative Blue type-KBW weapons lost in sector J.	W
CBWS(KBW)	Cumulative Blue type-KBW weapons in all sectors (dimensioned to weapon-days).	W
CFEBA(J)	Change in the FEBA in sector J due to movement in one day.	W
CRAKBP(KRA)	Scoreboard for cumulative Blue people killed by Red type-KRA aircraft.	W
CRAKBS(KRA,KBW)	Scoreboard for cumulative Blue type-KBW ground weapons killed by Red type-KRA aircraft.	W
CRAKM(M,KRA)	Cumulative Red type-KRA aircraft killed on mission M.	W
CRANK	Cumulative Red aircraft that are not sheltered and are killed.	W
CRAS(KRA)	Cumulative Red type-KRA aircraft in all sectors (dimensioned to aircraft-days).	W

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Variable Name	Definition	Type
CRASK	Cumulative Red aircraft that are sheltered and are killed.	W
CRBPC	Cumulative Red-over-Blue percent casualties.	W
CRBPCS(J)	Cumulative Red-over-Blue percent casualties in sector J.	W
CRC	Cumulative Red casualties.	W
CRCRI	Cumulative Red casualties in all regions due to IDR missions.	W
CRCS(J)	Cumulative Red casualties in sector J.	W
CRGKBP(KRW)	Scoreboard for cumulative Blue people killed by Red type-KRW ground weapons.	W
CRGKBS(KRW,KBW)	Scoreboard for cumulative Blue type-KBW weapons killed by Red type-KRW ground weapons.	W
CRGL	Cumulative Red AAA lost (in sectors, forward regions, rear regions, COMMZ due to air combat only).	W
CRNBC	Cumulative Red nonbattle casualties (including mines).	W
CRNBCM	Cumulative Red nonbattle casualties due to mines.	W
CRPC	Cumulative Red percent casualties.	W
CRPCS(J)	Cumulative Red percent casualties in sector J.	W
CRPS	Cumulative Red people of all types in all divisions in all sectors (dimensioned to people-days).	W
CRSAD	Cumulative Red shelters for aircraft destroyed.	W
CRSFM(M,KRA)	Cumulative Red type-KRA sorties flown on mission M.	W
CRSLI	Cumulative Red supplies lost en route to sector due to interdiction.	W
CRSML	Cumulative Red SAMs lost (in sectors, forward regions, rear regions, and COMMZ due to air combat only).	W
CRWL(KRW)	Cumulative Red type-KRW weapons lost.	W

Variable Name	Definition	Type
CRWLIR(KRW)	Cumulative Red type-KRW weapons lost on IDR missions in all regions.	W
CRWLS(KRW,J)	Cumulative Red type-KRW weapons lost in sector J.	W
CRWS(KRW)	Cumulative Red type-KRW weapons in all sectors (dimensioned to weapon-days).	W

CVFW   This is not a variable. It is a separate small subroutine that is defined using the dummy variable NVF, VFX(IVF), VFY(IVF), W, and V, where $1 \leq IVF \leq NVF$. (This subroutine also uses the dummy working variable FRAC.) The purpose of this subroutine is to calculate V as a function of W, which is done as follows:

$$V = \begin{cases} VFY(1), & \text{if } W \leq VFX(1); \\ VFY(NVF), & \text{if } W \geq VFX(NVF); \\ [(1 - FRAC) \times VFY(IVF-1)] + [FRAC \times VFY(IVF)], \\ \quad \text{where } FRAC = \dfrac{W - VFX(IVF-1)}{VFX(IVF) - VFX(IVF-1)}, \\ \quad \text{if } VFX(IVF-1) < W \leq VFX(IVF). \end{cases}$$

Variable Name	Definition	Type
D	(See ATTRIT.)	W
DABGSZ	Daily additional Blue general supplies in COMMZ. (RPTZ,4060)	I
DABRPZ	Daily additional Blue replacement people in COMMZ. (RPTZ,4000)	I
DABRWZ(KBW)	Daily additional Blue type-KBW replacement weapons in COMMZ. (RPTZ,4020)	I
DABSAM	Daily additional Blue SAMs (missiles). (RPTZ,4080)	I
DARGSZ	Daily additional Red general supplies in COMMZ. (RPTZ,4060)	I
DARRPZ	Daily additional Red replacement people in COMMZ. (RPTZ,4000)	I
DARRWZ(KRW)	Daily additional Red type-KRW replacement weapons in COMMZ. (RPTZ,4040)	I
DARSAM	Daily additional Red SAMs (missiles). (RPTZ,4080)	I
DEBRDD(LEB)	Delta EBRDD(LEB), where EBRDD(LEB) is the effectiveness of Blue replacements that have been with the division for LEB days.	W

Variable Name	Definition	Type
DERRDD(LER)	Delta ERRDD(LER), where ERRDD(LER) is the effectiveness of Red replacments who have been with the division for LER days.	W
DFBA2A	Intermediate delta FEBA used to calculate DFEBA2.	W
DFBA2B	Intermediate delta FEBA used to calculate DFEBA2.	W
DFBA2C	Intermediate delta FEBA used to calculate DFEBA2.	W
DFEBA	Change in FEBA due to battle this day (i.e., delta FEBA).	W
DFEBA1	Change in FEBA using attack-type 1 (delta FEBA using attack-type 1).	W
DFEBA2	Delta FEBA using attack-type 2.	W
DFEBA3	Delta FEBA using attack-type 3.	W
DFRB	Notional depth of a forward region for Blue. (RPAC, 8305)	I
DFRR	Notional depth of a forward region for Red. (RPAC,8306)	I
DIBGSZ	Daily increment to DABGSZ. (RPTZ,4070)	I
DIBRPZ	Daily increment to DABRPZ. (RPTZ,4010)	I
DIBRWZ(KBW)	Daily increment to DABRWZ(KBW). (RPTZ,4030)	I
DIBSAM	Daily increment to DABSAM (daily additional Blue SAMs). (RPTZ,4090)	I
DIRGSZ	Daily increment to DARGSZ. (RPTZ,4070)	I
DIRRPZ	Daily increment to DARRPZ. (RPTZ,4010)	I
DIRRWZ(KRW)	Daily increment to DARRWZ(KRW). (RPTZ,4050)	I
DIRSAM	Daily increment to DARSAM (daily additional Red SAMs). (RPTZ,4090)	I
DRRB	Notional depth of a rear region for Blue. (RPAC,8305)	I
DRRR	Notional depth of a rear region for Red. (RPAC,8306)	I
DSB	Notional depth of a sector for Blue. (RPAC,8305)	I

Variable Name	Definition	Type
DSHB	Days of supply on hand for Blue forces (based on a planned consumption rate and actual strength forces).	W
DSHR	Days of supply on hand for Red forces (based on a planned consumption rate and actual strength forces).	W
DSR	Notional depth of a sector for Red. (RPAC,8306)	I
DWVSRR	Defense weapons value in sector receiving reserves—i.e., either BDWVS(JRR) or RDWVS(JRR).	W
DZB	Notional depth of the COMMZ for Blue. (RPAC,8305)	I
DZR	Notional depth of the COMMZ for Red. (RPAC,8306)	I
EBPLDS(KBP,KBD)	Total Blue type-KBP people (within type-KBD divisions in the sector) that are lost according to trial allocation.	W
EBRDD(LEB)	Effectiveness of Blue replacements that have been with the division for LEB days. (RPTZ,5020)	I
EBRDR(LEB,KBD,IB)	Notional Blue replacements in effectiveness state LEB assigned to all type-KBD divisions in region IB.	W
EBRDS(LEB,KBD,J)	Notional Blue replacements in effectiveness state LEB assigned to all type-KBD divisions in sector J.	W
EBTPLS	Excess Blue total people lost in sector.	W
EDGEH(J)	Edge factor between sector J and J+1.	W
EDGEL(J)	Edge factor between sector J-1 and J.	W
EFCE	Epsilon for computing eigenvalues. (In computing the antipotential potential, if the ratio of the eigenvalue for the previous iteration to the eigenvalue for the current iteration is within EFCE of 1.0, the eigenvalues are assumed to have converged and the iterations are stopped. If not, the iterations continue until either the ratio of the eigenvalues is within EFCE of 1.0 or the maximum number of iterations have occurred given by the input MNIE.) (RPTZ,7210).	I
EFHIS(INTS,J)	Edge factor between sector J and sector J+1 in interval INTS in sector J. (RPTZ,2370)	I

Variable Name	Definition	Type
EFK	Expected fraction of targets killed (see ATTRIT).	W
EHFD	Exposed higher flank on defense.	W
EIGENV	This is not a variable. It is a separate small subroutine used to compute eigenvalues and weapon eigenvectors for the antipotential potential. The effectiveness matrices for Blue on Red (AA) and Red on Blue (BB) and the starting vector V are used to compute the eigenvector for Blue weapons (VB) and the eigenvector for Red weapons (VR). Matrix AA is NxM and matrix BB is MxN; Il indicates the Blue weapon used as reference that is inputted as the variable IWUCE.	
ELFD	Exposed lower flank on defense.	W
EPSLON	Value used when comparing against zero. This value must be strictly positive. (RPTZ,8180)	I
ERPLDS(KRP,KRD)	Total Red type-KRP people in KRD-type divisions in the sector that are lost according to trial allocation.	W
ERRDD(LER)	Effectiveness of Red replacements that have been with the division for LER days. (RPTZ,5030)	I
ERRDR(LER,KRD,IR)	Notional Red replacements in effectiveness state LER assigned to all type-KRD divisions in region IR.	W
ERRDS(LER,KRD,J)	Notional Red replacements in effectiveness state LER assigned to all type-KRD divisions in sector J.	W
ERTPLS	Excess Red total people lost in sector.	W
ESFD	Exposed single flank on defense.	W
FBACSI(KBA)	Fraction of Blue type-KBA aircraft on CAS attack that fly supply-interdiction missions. Note that $0 \le FBACSI(KBA) < 1$. (RPTZ,3720)	I
FBAISR(KBA)	Fraction of Blue aircraft on IDR missions that fly supply-interdiction missions in regions instead. (RPAC,8229)	I
FBARRR(IB,IR)	Fraction of Blue aircraft from region IB that attack Red region IR if there are equal number of Red aircraft in each Red region. (RPAC,8290)	I

Variable Name	Definition	Type
FBASAG	Fraction of Blue aircraft assigned to suppression missions that attack AAA, assuming equal numbers of SAMs and AAA. (RPAC,8277)	I
FEBA(J)	The FEBA location in sector J.	W
FEBAA	FEBA adjustment due to front-to-flank ratio constraints.	W
FEBAL	The FEBA location in the sector on the left that has been modified by the EDGE factor.	W
FEBAR	The FEBA location in the sector on the right that has been modified by the EDGE factor.	W
FEBATZ(J)	FEBA position in sector J at time zero. Note that FEBA(J) is a working variable, and FEBATZ(J) is an input. (RPTZ,2200)	I
FEBI(J)	Forward edge of the interval if Blue is on attack in sector J.	W
FEIR(J)	Forward edge of the interval if Red is on attack in sector J.	W
FFBAKH(KBA)	Factor for fraction of Blue type-KBA attackers killed on the way home. (RPAC,8370)	I
FFBDKH	Factor for fraction of Blue defenders killed on the way home. (RPAC,8371)	I
FFBEKH	Factor for fraction of Blue escorts killed on the way home. (RPAC,8371)	I
FFRAKH(KRA)	Factor for fraction of Red type-KRA attackers killed on the way home. (RPAC,8372)	I
FFRBDS(J)	Front-to-flank ratio, Blue on defense in sector J. (RPTZ,3780)	I
FFRBS(J)	Front-to-flank ratio for Blue in sector J. (RPTZ,3760)	I
FFRDKH	Factor for fraction of Red defenders killed on the way home. (RPAC,8373)	I
FFREKH	Factor for fraction of Red escorts killed on the way home. (RPAC,8373)	I
FFRRDS(J)	Front-to-flank ratio, Red on defense in sector J. (RPTZ, 3790)	I

Variable Name	Definition	Type
FFRRS(J)	Front-to-flank ratio for Red in sector J. (RPTZ, 3770)	I
FIBRLZ(IBRL,J)	Forward edge of interval IBRL in which Blue desires a certain reserve level (boundary between IBRL and IBRL+1). (RPTZ,3840)	I
FIRRLZ(IRRL,J)	Forward edge of interval IRRL in which Red desires a certain reserve level (boundary between IRRL and IRRL+1). (RPTZ,3850)	I
FLANKE	Total amount of exposed flank.	W
FLANKL	Amount of exposed flank on the left.	W
FLANKR	Amount of exposed flank on the right.	W
FPBS(IFPBS)	FEBA position for Blue shelters. (RPAC,8300)	I
FPRS(IFPRS)	FEBA position for Red shelters. (RPAC,8301)	I
FPS	FEBA position for locating shelters $= \begin{matrix} \max \text{(Blue)} \\ \min \text{(Red)} \end{matrix} \left\{ \text{FEBA(J)} : J \, \varepsilon \, \begin{matrix} \text{IB} \\ \text{IR} \end{matrix} \right\}.$	W
FR	Force ratio.	W
FRACSI(KRA)	Fraction of Red type-KRA aircraft on CAS attack that fly supply-interdiction missions. Note that $0 \leq$ FRACSI(KRA) < 1. (RPTZ,3721)	I
FRAISR(KRA)	Fraction of Red aircraft on IDR missions that fly supply-interdiction missions in regions instead. (RPAC,8234)	I
FRARBR(IR,IB)	Fraction of Red air from region IR that attack Blue region IB if there are equal numbers of Blue aircraft in each Blue region. (RPAC,8291)	I
FRASAG	Fraction of Red aircraft assigned to suppression missions that attack AAA , assuming equal numbers of SAMs and AAA . (RPAC,8277)	I
FRBAFF	Desired force ratio for Blue inside sector if Blue is on attack but the advance in main attack sector is constrained by front-to-flank ratio.	W

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Variable Name	Definition	Type
FRBAP(KP)	Desired force ratio in sector of main attack for Blue if Blue is on attack and the posture in the sector is KP. (RPTZ,6030)	I
FRBASA(J,KP)	Minimum force ratio for Blue to attack in sector J when Red is in posture KP and Blue is theater attacker. (RPTZ,3150)	I
FRBASD(J,KP)	Minimum force ratio for Blue to attack in sector J when Red is in posture KP and Blue is theater defender. (RPTZ,3155)	I
FRBAT(KP)	Minimum force ratio for Blue to attack in any sector whether it is a sector of main attack or not as a function of Red posture KP. (RPTZ,3130)	I
FRBDP(KP)	Desired force ratio for Blue if Blue is on defense and posture in sector of maximum FEBA advance is KP. (RPTZ,6040)	I
FRBR	Force ratio (Blue over Red).	W
FRBRS(J)	Force ratio (Blue over Red) in sector J.	W
FRBWAN	Force ratio (Blue over Red) above which Blue withdraws divisions in sectors that are not sectors of main attack (Blue is theater attacker). (RPTZ,3712)	I
FRBWDN	Force ratio (Red over Blue) below which Blue withdraws divisions in sectors that are not sectors of maximum FEBA advance (Blue is theater defender). (RPTZ,3714)	I
FRCA	Force-ratio value used to determine personnel casualties to the attacker.	W
FRCBH	Force-ratio value used to determine personnel casualties to Blue forces in a holding posture.	W
FRCD	Force-ratio value used to determine personnel casualties to the defender.	W
FRCRH	Force-ratio value used to determine personnel casualties to Red forces in a holding posture.	W
FRM	Force ratio for movement.	W
FRRAFF	Desired force ratio for Red inside sector if Red is on attack but the advance in main attack sector is constrained by the front-to-flank ratio.	W

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Variable Name	Definition	Type
FRRAP(KP)	Desired force ratio in sector of main attack for Red if Red is on attack and the sector posture is KP. (RPTZ, 6050)	I
FRRASA(J,KP)	Minimum force ratio for Red to attack in sector J when Blue is in posture KP and Red is theater attacker. (RPTZ,3160)	I
FRRASD(J,KP)	Minimum force ratio for Red to attack in sector J when Blue is in posture KP and Red is theater defender. (RPTZ,3165)	I
FRRAT(KP)	Minimum force ratio for Red to attack in any sector whether it is a sector of main attack or not as a function of Blue posture KP. (RPTZ,3140)	I
FRRB	Force ratio (Red over Blue).	W
FRRBS(J)	Force ratio (Red over Blue) in sector J.	W
FRRDP(KP)	Desired force ratio for Red if Red is on defense and posture in sector of maximum FEBA advance is KP. (RPTZ, 6060)	I
FRRWAN	Force ratio (Red over Blue) above which Red withdraws divisions in sectors that are not sectors of main attack (Red is theater attacker). (RPTZ,3711)	I
FRRWDN	Force ratio (Blue over Red) below which Red withdraws divisions in sectors that are not sectors of minimum FEBA advance (Red is theater defender). (RPTZ,3713)	I
IADDR	Index used to reference the position in a one-dimensional array that corresponds to the appropriate position in a two-dimensional array.	W
IAF	(See ATTRIT.)	W
IAGNAF	Index for air-to-AAA attrition function. (RPAC,8202)	I
IANSAF	Index for attacker-to-nonshelter attrition function. (RPAC,8203)	I
IASAF	Index for attacker-to-shelter attrition function. (RPAC,8203)	I
IASMAF	Index for air-to-SAM attrition function. (RPAC,8201)	I
IB	Index for Blue regions.	W

Variable Name	Definition	Type
IBAEF	Index over NBAEF ($1 \leq$ IBAEF $\leq$ NBAEF).	W
IBAFCR	Index indicating whether or not Blue air forces can cross region boundaries (1 = yes; 0 = no). (RPAC,8214)	I
IBDEF	Index over NBDEF ($1 \leq$ IBDEF $\leq$ NBDEF).	W
IBF	Blue region from which divisions are moved. (MF)	I
IBFMF	Index over NBFMF ($1 \leq$ IBFMF $\leq$ NBFMF).	W
IBGFCR	Index indicating whether or not Blue ground forces can cross region boundaries (1 = yes; 0 = no). (RPTZ,5000)	I
IBMF	Index for Blue region with maximum or minimum FEBA.	W
IBRL	Intervals where Blue desires a certain reserve level.	W
IBT	Blue region to which divisions are moved. (MF)	I
IDAAF	Index for defender-attacker attrition function. (RPAC, 8200)	I
IDEAF	Index for defender-escort attrition function. (RPAC, 8200)	I
IFPBS	Index for FEBA position for Blue shelters.	W
IFPRS	Index for FEBA position for Red shelters.	W
IGNAAF	Index for AAA-to-air attrition function. (RPAC,8202)	I
II	Index for print routines. Also used as a dummy variable in AC.	W
IKBDA	Index for type of Blue division on attack.	W
IKBDD	Index for type of Blue division on defense.	W
IKRDA	Index for type of Red division on attack.	W
IKRDD	Index for type of Red division on defense.	W
INBDZ	Index for number of Blue divisions in COMMZ.	W
INDR	Index for divisions per region—i.e., INBDR or INRDR.	W
INDS	Index for division in sector.	W

Variable Name	Definition	Type
INRDZ	Index for number of Red divisions in COMMZ.	W
INTS	Index for the interval number in the sector.	W
IPCBAF	Index over NPCBAF ($1 \leq$ IPCBAF $\leq$ NPCBAF).	W
IPCBDF	Index over NPCBDF ($1 \leq$ IPCBDF $\leq$ NPCBDF).	W
IPCRAF	Index over NPCRAF ($1 \leq$ IPCRAF $\leq$ NPCRAF).	W
IPCRDF	Index over NPCRDF ($1 \leq$ IPCRDF $\leq$ NPCRDF).	W
IPGBW(KBW)	Index for protection group for Blue weapons $= \begin{cases} 1, \text{ if KBW is in Group 1;} \\ 2, \text{ if KBW is in Group 2;} \\ 3, \text{ if KBW is in Group 3.} \end{cases}$ (RPTZ,2265)	I
IPGRW(KRW)	Index for protection group for Red weapons $= \begin{cases} 1, \text{ if KRW is in Group 1;} \\ 2, \text{ if KRW is in Group 2;} \\ 3, \text{ if KRW is in Group 3.} \end{cases}$ (RTPZ,2270)	I
IPRA(II)	Days on which a detailed printout will be made. (MAIN, 92)	I
IPRB(II) .	Days on which a summary printout will be made. (MAIN, 93)	I
IPR1	Working variable for printing detailed output.	W
IPR1T	Indicator for printing detailed output $= \begin{cases} 1, \text{ if detailed output is to be printed;} \\ 0, \text{ if no detailed output is to be printed.} \end{cases}$ (MAIN,91)	I
IPR2T	Indicator for printing summary output $= \begin{cases} 1, \text{ if summary output is to be printed;} \\ 0, \text{ if no summary output is to be printed.} \end{cases}$ (MAIN,91)	I
IR	Index for Red regions.	W
IRAEF	Index over NRAEF ($1 \leq$ IRAEF $\leq$ NRAEF).	W
IRAFCR	Index indicating whether or not Red air forces can cross region boundaries (1 = yes; 0 = no). (RPAC,8214)	I

Variable Name	Definition	Type
IRBAF(KBA)	Index for range of Blue type-KBA aircraft based on forward airbases $= \begin{cases}1, \text{ if they can fly interception;} \\ 2, \text{ if they can get to enemy sector;} \\ 3, \text{ if they can get to enemy forward region;} \\ 4, \text{ if they can get to enemy rear region;} \\ 5, \text{ if they can get to enemy COMMZ.}\end{cases}$ (RPAC,8205)	I
IRBAR(KRA)	Index for range of Blue type-KBA aircraft based on rear airbases $= \begin{cases}1, \text{ if they can fly interception;} \\ 2, \text{ if they can fly to enemy sector;} \\ 3, \text{ if they can fly to enemy forward region;} \\ 4, \text{ if they can fly to enemy rear region;} \\ 5, \text{ if they can fly to enemy COMMZ.}\end{cases}$ (RPAC,8206)	I
IRBAZ(KBA)	Index for range of Blue type-KBA aircraft based on COMMZ $= \begin{cases}1, \text{ if they can fly interception;} \\ 2, \text{ if they can fly to enemy sector;} \\ 3, \text{ if they can fly to enemy forward region;} \\ 4, \text{ if they can fly to enemy rear region;} \\ 5, \text{ if they can fly to enemy COMMZ.}\end{cases}$ (RPAC,8207)	I
IRDEF	Index over NRDEF ($1 \le$ IRDEF $\le$ NRDEF).	W
IRF	Red region from which divisions are moved (MF).	I
IRFB	Index indicating whether Blue forces are read in subroutine RF on day NTRF. (MAIN,94)	I
IRFMF	Index over NRFMF ($1 \le$ IRFMF $\le$ NRFMF).	W
IRFR	Index indicating whether Red forces are read in subroutine RF on day NTRF. (MAIN,94)	I
IRGFRC	Index indicating whether or not Red ground forces can cross region boundaries (1 = yes; 0 = no). (RPTZ,5000)	I
IRMF	Index for Red region with maximum or minimum FEBA.	W

Variable Name	Definition	Type
IRRAF(KRA)	Index for range of Red type-KRA aircraft based on forward airbases $= \begin{cases} 1, \text{ if they can fly interception;} \\ 2, \text{ if they can fly to enemy sector;} \\ 3, \text{ if they can fly to enemy forward region;} \\ 4, \text{ if they can fly to enemy rear region;} \\ 5, \text{ if they can fly to enemy COMMZ.} \end{cases}$ (RPAC,8210)	I
IRRAR(KRA)	Index for range of Red type-KRA aircraft based on rear airbases $= \begin{cases} 1, \text{ if they can fly interception;} \\ 2, \text{ if they can fly to enemy sector;} \\ 3, \text{ if they can fly to enemy forward region;} \\ 4, \text{ if they can fly to enemy rear region;} \\ 5, \text{ if they can fly to enemy COMMZ.} \end{cases}$ (RPAC,8211)	I
IRRAZ(KRA)	Index for range of Red type-KRA aircraft based on COMMZ $= \begin{cases} 1, \text{ if they can fly interception;} \\ 2, \text{ if they can fly to enemy sector;} \\ 3, \text{ if they can fly to enemy forward region;} \\ 4, \text{ if they can fly to enemy rear region;} \\ 5, \text{ if they can fly to enemy COMMZ.} \end{cases}$ (RPAC,8212)	I
IRRL	Intervals where Red desires a certain reserve level.	W
IRT	Red regions to which divisions are moved. (MF)	I
ISA	Index for sector attacker $= \begin{cases} 1, \text{ if Red is sector attacker;} \\ -1, \text{ if Blue is sector attacker;} \\ 0, \text{ if neither side is sector attacker.} \end{cases}$	W
ISAS(J)	Index for sector attacker in sector J $= \begin{cases} 1, \text{ if Red is sector attacker;} \\ -1, \text{ if Blue is sector attacker;} \\ 0, \text{ if neither side is sector attacker.} \end{cases}$	W
ISCFFR(J)	Index for sector that is constrained by front-to-flank ratio.	W
ISCFF2(J)	Index indicating whether sector J has been constrained by front-to-flank ratio for two or more days.	W
ISMA(J)	Index for sector of main attack $= \begin{cases} 1, \text{ if J is sector of main attack;} \\ 0, \text{ otherwise.} \end{cases}$	W

Variable Name	Definition	Type
ISMAAF	Index for SAM-to-air attrition function. (RPAC,8201)	I
ISMAB(J)	Input variable for sector of main attack for Blue. (RPTZ,2220)	I
ISMAR(J)	Input variable for sector of main attack for Red. (RPTZ, 2230)	I
ISMF(J)	Index for sector of maximum or minimum FEBA in its region.	W
ISR	Index for side receiving reserves $= \begin{cases} +1, \text{ if attacker;} \\ -1, \text{ if defender.} \end{cases}$	W
ISRZ	Index for sector, region, or COMMZ. $= \begin{cases} 1, \text{ if move is from sector to sector;} \\ 2, \text{ if move is from sector to region;} \\ 3, \text{ if move is from region to sector;} \\ 4, \text{ if move is from region to region;} \\ 5, \text{ if move is from COMMZ to sector;} \\ 6, \text{ if move is from COMMZ to region.} \end{cases}$	W
ISUPAS(J)	Index for surprise attack in sector J $= \begin{cases} 1, \text{ if the attack on the first day in sector J is a surprise;} \\ 0, \text{ otherwise.} \end{cases}$ (RPTZ,2260)	I
IT	Index for time ($1 \le IT \le NTPP$).	W
ITA	Index for theater attacker $= \begin{cases} 1, \text{ if Red is theater attacker;} \\ -1, \text{ if Blue is theater attacker.} \end{cases}$ (RPTZ,2190)	I
ITAY	Initial theater attacker for yesterday.	W
ITEMP	Dummy variable defined as needed throughout the computer program.	W
ITT	Working variable used in reading new parameters.	W
IVF	(See CVFW.)	W
IWUCE	Index for the Blue weapon type used as the reference weapon in computing eigenvectors for the antipotential potential. (RPTZ,7200)	I

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Variable Name	Definition	Type
I1	Subroutine index for Blue weapon used as reference for antipotential potential (I1 = IWUCE in program) (see EIGENV).	W
J	Index for combat sectors.	W
JF	Sector from which divisions are moved. (MF)	I
JMF	Sector for maximum or minimum FEBA advance.	W
JMFB	Dummy variable for sector of minimum FEBA for Blue.	W
JMFR	Dummy variable for sector of maximum FEBA for Red.	W
JRA	Sector receiving aircraft.	W
JRR	Index for the sector receiving replacements.	W
JT	Sector to which divisions are moved. (MF)	I
JTEMP	Index for which side is moving divisions from COMMZ to regions $= \begin{cases} 1, \text{ if Blue;} \\ 0, \text{ if Red.} \end{cases}$	W
J1	Lowest-numbered sector in a particular region.	W
J2	Highest-numbered sector in a particular region.	W
KBA	Type of Blue aircraft.	W
KBAM	Type of Blue air munition.	W
KBAS(KBA)	Array indicating the priority of sheltering Blue aircraft. (RPAC,8325)	I
KBD	Type of Blue divisions.	W
KBDATV(KBD)	Type of Blue division on attack according to TOE value.	W
KBDDTV(KBD)	Type of Blue division on defense according to TOE value.	W
KBDM	Type of Blue division moved. (MF)	I
KBP	Type of Blue people (1 = combat people; 2 = combat-support people; 3 = combat-service-support people).	W
KBW	Type of Blue weapons.	W
KD	Stands for type of division (KBD or KRD).	W

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Variable Name	Definition	Type
KKBD	Dummy index for Blue type-KBD division.	W
KKBP	Dummy index for Blue type-KBP people.	W
KKBW	Dummy index for Blue type-KBW weapon.	W
KKRD	Dummy index for Red type-KRD division.	W
KKRP	Dummy index for Red type-KRP people.	W
KKRW	Dummy index for Red type-KRW weapon.	W
KP	Index for kind of posture.	W
KPBA(J)	Type of posture that will exist if Blue is attacking in sector J (this is a function of FEBA(J)) $= \begin{cases} 1, \text{ if Blue is attacking and Red is delaying;} \\ 2, \text{ if Blue is attacking a Red defensive position;} \\ 3, \text{ if Blue has just broken through a Red defensive position;} \\ 4, \text{ if Blue is attacking through a Red minefield.} \end{cases}$	W
KPBAIS(INTS,J)	Type of posture if Blue is on attack in interval INTS in sector J (RPTZ,2340) $= \begin{cases} 1, \text{ if Red is delaying in that interval;} \\ 2, \text{ if Red has a defensive position in that interval;} \\ 4, \text{ if Red has a minefield in that interval;} \\ (3 \text{ should not be input as a value for this variable).} \end{cases}$	I
KPBAN(J)	Type of posture if Blue is on attack in the next interval in sector J.	W
KPBAY(J)	Type of posture if Blue was on attack yesterday in sector J.	W
KPRA(J)	Type of posture that will exist if Red is attacking in sector J (this is a function of FEBA(J)) $= \begin{cases} 1, \text{ if Red is attacking and Blue is delaying;} \\ 2, \text{ if Red is attacking a Blue defensive position;} \\ 3, \text{ if Red has just broken through a Blue defensive position;} \\ 4, \text{ if Red is attacking through a Blue minefield.} \end{cases}$	W
KPRAIS(INTS,J)	Type of posture if Red is on attack in interval INTS in sector J (RPTZ,2350) $= \begin{cases} 1, \text{ if Blue is delaying in that interval;} \\ 2, \text{ if Blue has a defensive position in that interval;} \\ 4, \text{ if Blue has a minefield in that interval;} \\ (3 \text{ should not be input as a value for this variable).} \end{cases}$	I

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Variable Name	Definition	Type
KPRAN(J)	Type of posture if Red is on attack in the next interval in sector J.	W
KPRAY(J)	Type of posture if Red was on attack yesterday in sector J.	W
KRA	Type of Red aircraft.	W
KRAM	Type of Red air munition.	W
KRAS(KRA)	Array indicating the priority of sheltering Red aircraft. (RPAC,8326)	I
KRD	Type of Red division.	W
KRDATV(KRD)	Type of Red division on attack according to TOE value.	W
KRDDTV(KRD)	Type of Red division on defense according to TOE value.	W
KRDM	Type of Red division moved. (MF)	I
KRP	Type of Red people (1 = combat people; 2 = combat-support people; 3 = combat-service-support people).	W
KRW	Type of Red weapon.	W
KT	Type of terrain.	W
KTER(J)	Type of terrain in sector J.	W
KTERIS(INTS,J)	Type of terrain in interval INTS in sector J. (RPTZ, 2330)	I
KTERNB(J)	Type of terrain in the next interval if Blue is on attack.	W
KTERNR(J)	Type of terrain in the next interval if Red is on attack.	W
L	Indicator describing the following situtations for aircraft attrition. $= \begin{cases} 1, \text{ if fly by;} \\ 2, \text{ if attack on main target.} \end{cases}$ Also number of columns of matrix B (see MPROD).	W
LEB	Index variable for the number of days until notional Blue replacement reaches full efficiency in combat.	W

Variable Name	Definition	Type
LER	Index variable for the number of days until notional Red replacement reaches full efficiency in combat.	W
LNSBR(IB)	Highest- (largest-) numbered sector in Blue region IB. (RPTZ,2240)	I
LNSRR(IR)	Highest- (largest-) numbered sector in Red region IR. (RPTZ,2250)	I
LONSBR(IB)	Working variable indicating lowest-numbered sector in Blue region IB.	W
LONSRR(IR)	Working variable indicating lowest-numbered sector in Red region IR.	W
LTEMP	Reason for withdrawing from sector to region $= \begin{cases} 1, \text{ if withdrawal based on front-to-flank ratio;} \\ 2, \text{ if withdrawal based on ISMA.} \end{cases}$	W
LVBAA(KBA)	Linear value of a Blue type-KBA aircraft when Blue is on attack (if MCFR = 3 or 4, LVBAA(KBA) > 0; otherwise, if MCFR = 1 or 2, set LVBAA(KBA) = 0). (RPTZ,3303)	I
LVBAD(KBA)	Linear value of a Blue type-KBA aircraft when Blue is on defense (if MCFR = 3 or 4, LVBAD(KBA) > 0). (RPTZ,3304)	I
LVBWA(KBW)	Linear value of a Blue type-KBW weapon when Blue is on attack (if MCFR = 3 or 4, LVBWA(KBW) > 0). (RPTZ,3301)	I
LVBWD(KBW)	Linear value of a Blue type-KBW weapon when Blue is on defense (if MCFR = 3 or 4, LVBWD(KBW) > 0). (RPTZ,3302)	I
LVRAA(KRA)	Linear value of a Red type-KRA aircraft when Red is on attack (if MCFR = 3 or 4, LVRAA(KRA) > 0). (RPTZ,3307)	I
LVRAD(KRA)	Linear value of a Red type-KRA aircraft when Red is on defense (if MCFR = 3 or 4, LVRAD(KRA) > 0). (RPTZ,3308)	I
LVRWA(KRW)	Linear value of a Red type-KRW weapon when Red is on attack (if MCFR > 3 or 4, LVRWA(KRA) > 0). (RPTZ,3305)	I
LVRWD(KRW)	Linear value of a Red type-KRW weapon when Red is on defense (if MCFR = 3 or 4, LVRWD(KRW) > 0). (RPTZ,3306)	I
M	(See ATTRIT.) Also used to denote mission type; number of columns of matrix ZZ or matrix A; and the number of rows of matrix BB or matrix B (see EIGENV and MPROD).	W

Variable Name	Definition	Type
MABRPZ	Maximum additional Blue replacement people in COMMZ. (RPTZ,3860)	I
MABRWZ(KBW)	Maximum additional Blue type-KBW replacement weapons in COMMZ. (RPTZ,3870)	I
MARRPZ	Maximum additional Red replacement people in COMMZ. (RPTZ,3860)	I
MARRWZ(KRW)	Maximum additional Red type-KRW replacement weapons in COMMZ. (RPTZ,3880)	I
MBRFBA	Minimum Blue-over-Red force ratio if Blue is on attack. (RPTZ,6070)	I
MBRFRD	Red's maximum desired Blue-over-Red force ratio if Red on defense. (RPTZ,6070)	I
MCBM	Method for computing Blue mobility $= \begin{cases} 1, \text{ if standard rate is used;} \\ 2, \text{ if minimum rate is used;} \\ 3, \text{ if maximum rate is used;} \\ 4, \text{ if weighted average is used.} \end{cases}$ (RPTZ,3325)	I
MCFR	Method of computing force ratio $= \begin{cases} 1, \text{ if nonstandard, casualty potential;} \\ 2, \text{ if standard, casualty potential;} \\ 3, \text{ if nonstandard, simple linear;} \\ 4, \text{ if standard, simple linear;} \\ 5, \text{ if nonstandard, antipotential potential;} \\ 6, \text{ if standard, antipotential potential.} \end{cases}$ (RPTZ,2300)	I
MCRM	Method for computing Red mobility $= \begin{cases} 1, \text{ if standard rate is used;} \\ 2, \text{ if minimum rate is used;} \\ 3, \text{ if maximum rate is used;} \\ 4, \text{ if weighted average is used.} \end{cases}$ (RPTZ,3325)	I
MCSMAB	Method for computing sector of main attack for Blue $= \begin{cases} 1, \text{ if sector with best (for Blue) FEBA;} \\ 2, \text{ if sector with worst (for Blue) FEBA;} \\ 3, \text{ if user input. (RPTZ,2210)} \end{cases}$	I
MCSMAR	Method for computing sector of main attack for Red $= \begin{cases} 1, \text{ if sector with best (for Red) FEBA} \\ 2, \text{ if sector with worst (for Red) FEBA} \\ 3, \text{ if user input. (RPTZ,2210)} \end{cases}$	I

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Variable Name	Definition	Type
MFEBA	Minimum or maximum FEBA position.	W
MNBDS(J)	Maximum number of Blue divisions allowed in sector J. (RPTZ,2380)	I
MNIE	Maximum number of iterations for computing eigenvalues (see EFCE). (RPTZ,7205)	I
MNNDS	Maximum number of new divisions that can fit into the sector.	W
MNRDS(J)	Maximum number of Red divisions allowed in sector J. (RPTZ,2390)	I
MOT	Output file.	W
MPROD	This is not a variable. It is a separate small sub-routine, which multiplies an NxM matrix A and an MxL matrix B, returning an NxL matrix R.	
MRBFBD	Blue's maximum desired Red-over-Blue force ratio if Blue is on defense. (RPTZ,6080)	I
MRBFRA	Minimum Red-over-Blue force ratio if Red is on attack. (RPTZ,6080)	I
MTT	Input file for time T (card input).	W
MURS	Method used to reinforce sectors.	W
MZT	Input file for time zero (tape input).	W
N	Number of rows of matrix AA or matrix A (see EIGENV and MPROD).	W
NBAEF BAEFX(IBAEF) BAEFY(KBD,IBAEF)	These parameters define the functional relationship BAEF(KBD,BPP), which is used to compute Blue attack effectiveness as a function of type of division and of percent personnel strength (BPP). (RPTZ,8000)	I

- NBAEF The number of endpoints used in the piece-wise linear segments of the function (IBAEF = 1, ...,NBAEF).

- BAEFX(IBAEF) The percent of personnel strength which, together with the type of division (KBD) gives the abscissa coordinate of the $IBAEF^{th}$ end-point of the function BAEF.

- BAEFY(KBD,IBAEF) The value of the function BAEF at the point KBD,BAEFX(IBAEF).

Variable	Definition	Type
NBDEF BDEFX(IBDEF) BDEFY(KBD,IBDEF)	These parameters define the functional relation- ship BDEF(KBD,BPP) that is used to compute Blue defense effectiveness as a function of Blue type- KBD division and of percent personnel strength (BPP). (RPTZ,8015)	I
NBDM	Number of Blue divisions moved (by type of division). (MF)	I
NBDR(KBD,IB)	Number of Blue type-KBD divisions in region IB. (RFTZ,1020)	I
NBDS(KBD,J)	Number of Blue type-KBD divisions in sector J. (RFTZ,1010)	I
NBDSZR(KBD)	Number of Blue type-KBD divisions sent from COMMZ to regions.	W
NBDZ(KBD)	Number of Blue type-KBD divisions in COMMZ. (RFTZ,1030)	I
NBFMF BFMFX(IBFMF) BFMFY(KP,KT,IBFMF)	These parameters define the functional relation- ship BFMF(KP,KT,FRM), which is used to compute FEBA movement while the Blue force is attacking in posture KP, terrain KT, with force ratio FRM. (RPTZ,8120) • NBFMF The number of endpoints of the piecewise linear segments of the function (IBFMF = 1,..., NBFMF). • BFMFX(IBFMF) The force ratio value which, together with the type of posture (KP) and terrain type KT, gives the abscissa coordinate of the IBFMFth endpoint of the function BFMF. • BFMFY(KP,KT,IBFMF) The value of the function BFMF at the point defined by KP,KT,BFMFX(IBFMF).	I
NBM	Number of Blue moves.	W
NBMSR(ISRZ)	Number of Blue moves from sectors and regions. (MF)	I
NB1	Dummy variable for NBDZ(KBD).	W
NDSRS(KBD or KRD)	Number of type-KBD or type-KRD divisions sent from region to sector.	W
NDSSR(KBD or KRD)	Number of type-KBD or type-KRD divisions sent from sector to region.	W

Variable Name	Definition	Type
NIB	Number of Blue regions. (RCD,110)	I
NIBRL	Number of intervals where Blue has desired reserve levels. (RCD,320)	I
NIFPBS	Number of indices for FEBA position for Blue shelters. (RCD,330)	I
NIFPRS	Number of indices for FEBA position of Red shelters (RCD,330)	I
NIMAX	Number of intervals in the sector with the most inter-vals--i.e., max {NINTS(J) : 1 $\leq$ J $\leq$ NJ}. (RPTZ,2305).	I
NINTS(J)	Number of intervals in sector J. (RPTZ,2310)	I
NIR	Number of Red regions. (RCD,110)	I
NIRRL	Number of intervals where Red has desired reserve levels. (RCD,320)	I
NIS	Number of intervals in the sector--a stand-in variable for NINTS(J).	W
NISM1	Number of intervals in the sector minus 1.	W
NJ	Input variable for number of sectors.	I
NJ1	NJ minus 1.	W
NKBA	Number of types of Blue aircraft. (RCD,210)	I
NKBAM	Number of types of Blue air munitions. (RCD,210)	I
NKBD	Number of types of Blue divisions. (RCD,210)	I
NKBP	Number of types of Blue people. (RCD,210)	I
NKBW	Number of types of Blue weapons. (RCD,210)	I
NKBW1	NKBW minus 1.	W
NKP	Number of types of postures. (RCD,110)	I
NKRA	Number of types of Red aircraft. (RCD,220)	I
NKRAM	Number of types of Red air munitions. (RCD,220)	I
NKRD	Number of types of Red divisions. (RCD,220)	I
NKRP	Number of types of Red people. (RCD,220)	I

Variable Name	Definition	Type
NKRW	Number of types of Red weapons. (RCD,220)	I
NKRW1	NKRW minus 1.	W
NKT	Number of types of terrain. (RCD,110)	I
NLEB	Maximum number of days it takes a Blue replacement to gain full efficiency in combat. (RCD,310)	I
NLEB1	NLEB minus 1.	W
NLER	Maximum number of days it takes a Red replacement to gain full efficiency in combat. (RCD,310)	I
NLER1	NLER minus 1.	W
NNBDZ(KBD)	Number of new Blue type-KBD divisions in COMMZ.	W
NNDR(KBD or KRD)	Number of new type-KBD or type-KRD divisions in region.	W
NNDS(KBD or KRD)	Number of new type-KBD or type-KRD divisions in sector.	W
NNRDZ(KRD)	Number of new Red type-KRD divisions in COMMZ.	W

NPCRAF
  PCBAFX(IPCBAF)
  PCBAFY(KP,IPCBAF)
	These parameters define the functional relationship PCBA(KP,FRC), which is used to compute percent casualties to the Blue force on attack as a function of kind of posture KP and of force ratio FRC. (RPTZ,8060)
	
	• NPCBAF The number of endpoints used in the piecewise linear segments of the function (IPCBAF = 1,...,NPCBAF).
	
	• PCBAFX(IPCBAF) The force ratio value which, together with the type of posture (KP), gives the abscissa of the IPCBAF[th] endpoint of the function PCBA.
	
	• PCBAFY(KP,IPCBAF) The value of the function PCBA at the point defined by KP,PCBAFX(IPCBAF).
		I

NPCBDF
  PCBDFX(IPCBDF)
  PCBDFY(KP,IPCBDF)
	These parameters define the functional relationship to PCBD(KP,FRC), which is used to compute percent casualties to the Blue force on defense as a function of kind of posture KP and force ratio FRC. (RPTZ,8075)	I

Variable Names	Definition	Type

NPCBHF
  PCBHFX(IPCBHF)
  PCBHFY(IPCBHF)
	These parameters define the functional relation-
	ship PCBH(FRCBH), which is used to compute percent
	casualties to the Blue force while in a holding
	posture as a function of the force ratio FRCBH.
	(RPTZ,8086)
		I

NPCRAF
  PCRAFX(IPCRAF)
  PCRAFY(KP,IPCRAF)
	These parameters define the functional relationship
	PCRA(KP,FRC), which is used to compute percent
	casualties to the Red force on attack as a function
	of kind of posture KP and force ratio FRC. (RPTZ,
	8090).
		I

NPCRDF
  PCRDFX(IPCRDF)
  PCRDFY(KP,IPCRDF)
	These parameters define the functional relationship
	PCRD(KP,FRC), which is used to compute percent
	casualties to the Red force on defense as a
	function of kind of posture KP and force ratio FRC.
	(RPTZ,8105)
		I

NPCRHF
  PCRHFX(IPCRHF)
  PCRHFY(IPCRHF)
	These parameters define the functional relationship
	PCRH(FRC), which is used to compute percent casual-
	ties to the Red force while in a holding posture as
	a function of the force ratio FRC. (RPTZ,8116)
		I

NRAEF
  RAEFX(IRAEF)
  RAEFY(KRD,IRAEF)
	These parameters define the functional relationship
	RAEF(KRD,RPP), which is used to compute Red attack
	effectiveness as a function of type-KRD division
	and percent personnel strength RPP. (RPTZ,8030)
		I

NRDEF
  RDEFX(IRDEF)
  RDEFY(KRD,IRDEF)
	These parameters define the functional relationship
	RDEF(KRD,RPP), which is used to compute Red attack
	effectiveness as a function of Red type-KRD divi-
	sion and percent personnel strength RPP. (RPTZ,
	8045)
		I

NRDM	Number of Red divisions moved (by type of divi- sion). (MF)	I
NRDR(KRD,IR)	Number of Red type-KRD divisions in region IR. (RFTZ,2020)	I
NRDS(KRD,J)	Number of Red type-KRD divisions in sector J. (RFTZ,2010)	I
NRDSZR(KRD)	Number of Red type-KRD divisions sent from COMMZ to region.	W
NRDZ(KRD)	Number of Red type-KRD divisions in COMMZ. (RFTZ, 2030)	I

Variable Name	Definition	Type

NRFMF
  RFMFX(IRFMF)
  RFMFY(KP,KT,IRFMF)
	These parameters define the functional relationship RFMF(KP,KT,FRM), which is used to compute FEBA movement while the Red force is attacking in posture KP and terrain KT with force ratio FRM. (RPTZ,8135)	I

NRM	Number of Red moves.	W
NRMSR(ISRZ)	Number of Red moves from sectors and regions. (MF)	I
NR1	Dummy variable for NRDZ(KRD).	W
NSCRRF	Number of sectors constrained by front-to-flank ratio.	W

NSEFBF
  SEFBFX(ISEFBF)
  SEFBFY(ISEFBF)
	Supply effectiveness factor for Blue as a function of DSHB. (RPTZ,8150)	I

NSEFRF
  SEFRFX(ISEFRF)
  SEFRFY(ISEFRF)
	Supply effectiveness factor for Red as a function of DSHR. (RPTZ,8165)	I

NTAP	Next time to read air parameters. (MAIN,90)	I
NTMF	Next time to move forces. (MAIN,90)	I
NTPP	Number of time periods to be played. (MAIN,90)	I
NTRF	Next time to read in new forces. (MAIN,90)	I
NTRP	Next time to read in new parameters. (MAIN,90)	I
NVF	(See CVFW.)	W
PAA4	Percent aircraft able to fly ABA missions.	W
PAA5	Percent aircraft able to fly ABAE missions.	W
PABSDR	Percent attacked Blue shelters killed by Red. (RPAC, 8299)	I
PARSDB	Percent attacked Red shelters killed by Blue. (RPAC, 8299)	I
PAF1T $\begin{pmatrix} KRA,IR \\ KBA,IB \end{pmatrix}$	Percent $\begin{pmatrix} Red \\ Blue \end{pmatrix} \begin{pmatrix} type\text{-}KRA \\ type\text{-}KBA \end{pmatrix}$ aircraft from forward-region $\begin{pmatrix} IR \\ IB \end{pmatrix}$ assigned to CAS missions totaled over all sectors.	W

Variable Name	Definition	Type
PAF2T $\begin{pmatrix} KRA,IR \\ KBA,IB \end{pmatrix}$	Percent $\begin{pmatrix} Red \\ Blue \end{pmatrix}\begin{pmatrix} type\text{-}KRA \\ type\text{-}KBA \end{pmatrix}$ aircraft from forward-region $\begin{pmatrix} IR \\ IB \end{pmatrix}$ assigned to CASE missions totaled over all regions.	W
PAR1T $\begin{pmatrix} KRA,IR \\ KBA,IB \end{pmatrix}$	Percent $\begin{pmatrix} Red \\ Blue \end{pmatrix}\begin{pmatrix} type\text{-}KRA \\ type\text{-}KBA \end{pmatrix}$ aircraft from rear-region $\begin{pmatrix} IR \\ IB \end{pmatrix}$ assigned to CAS missions totaled over all sectors.	W
PAR2T $\begin{pmatrix} KRA,IR \\ KBA,IB \end{pmatrix}$	Percent $\begin{pmatrix} Red \\ Blue \end{pmatrix}\begin{pmatrix} type\text{-}KRA \\ type\text{-}KBA \end{pmatrix}$ aircraft from rear-region $\begin{pmatrix} IR \\ IB \end{pmatrix}$ assigned to CASE missions totaled over all regions.	W
PAU45	Percent aircraft unable to fly ABA or ABAE missions.	W
PBAAGM(KBA)	Passes made by Blue type-KBA aircraft on air-to-ground mission. (RPAC,8278)	I
PBAAKR(KBA,KRW)	Percent Red type-KRW weapons that one Blue type-KBA aircraft kills when Blue is on attack (Blue kills Red).	W
PBAAS(KBA)	Percent Blue type-KBA aircraft on ABA missions assigned to suppression. (RPAC,8232)	I
PBACS(KBA)	Percent remaining Blue type-KBA aircraft assigned to suppression after the minimum number of CAS attackers are assigned to attack missions. (RPAC, 8230)	I
PBADKR(KBA,KRW)	Percent Red type-KRW weapons that one Blue type-KBA aircraft kills when Blue is on defense (Blue kills Red).	W
PBAF1(KBA,IB,J)	Percent Blue type-KBA aircraft sent from forward-region IB to sector J on CAS missions.	W
PBAF2(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from forward-region IB to sector J on CASE missions.	W
PBAF3(KBA,IB)	Percent Blue type-KBA aircraft sent from forward-region IB to sector J on BD missions.	W

Variable Name	Definition	Type
PBAF4F(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue forward-region IB to Red forward-region IR on ABA missions.	W
PBAF4R(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue forward-region IB to Red rear-region IR on ABA missions.	W
PBAF4Z(KBA,IB)	Percent Blue type-KBA aircraft sent from Blue forward-region IB to Red COMMZ on ABA missions.	W
PBAF5F(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue forward-region IB to Red forward-region IR on ABAE missions.	W
PBAF5R(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue forward-region IB to Red rear-region IR on ABAE missions.	W
PBAF5Z(KBA,IB)	Percent Blue type-KBA aircraft sent from Blue forward-region IB to Red COMMZ on ABAE missions.	W
PBAF6(KBA,IB)	Percent Blue type-KBA aircraft from Blue forward-region IB on ABD missions.	W
PBAF7F(KBA,IB,IR)	Percent Blue type-KBA aircraft from Blue forward-region IB on IDR missions.	W
PBAKRP(KP,KBW,KRW)	Percent Red type-KRW weapons that one Blue type-KBW weapon kills when Blue is on attack in posture KP (Blue kills Red). (Here KP = 1 or 2 only.)	W
PBAR1(KBA,IB,J)	Percent type-KBA aircraft sent from rear-region IB to sector J on CAS missions.	W
PBAR2(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from rear-region IB to sector J on CASE missions.	W
PBAR3(KBA,IB)	Percent Blue type-KBA aircraft sent from rear-region IB to sector J on BD missions.	W
PBAR4F(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue rear-region IB to Red forward-region IR on ABA missions.	W
PBAR4R(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue rear-region IB to Red rear-region IR on ABA missions.	W
PBAR4Z(KBA,IB)	Percent Blue type-KBA aircraft sent from Blue rear-region IB to Red COMMZ on ABA missions.	W
PBAR5F(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue rear-region IB to Red forward-region IB on ABAE missions.	W

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Variation Name	Definition	Type
PBAR5R(KBA,IB,IR)	Percent Blue type-KBA aircraft sent from Blue rear-region to Red rear-region IB on ABAE missions.	W
PBAR5Z(KBA,IB)	Percent Blue type-KBA aircraft sent from Blue rear-region IB to Red COMMZ on ABAE missions.	W
PBAR6(KBA,IB)	Percent Blue type-KBA aircraft from Blue rear-region IB on ABD missions.	W
PBAR7F(KBA,IB,IR)	Percent Blue type-KBA aircraft from Blue rear-region IB on IDR missions.	W
PBAZ1(KBA,J)	Percent Blue type-KBA aircraft sent from COMMZ to sector J on CAS missions.	W
PBAZ2(KBA,IR)	Percent Blue type-KBA aircraft sent from COMMZ to sector J on CASE missions.	W
PBAZ3(KBA,IB)	Percent Blue type-KBA aircraft sent from COMMZ to sector J on BD missions.	W
PBAZ4F(KBA,IR)	Percent Blue type-KBA aircraft sent from Blue COMMZ to Red forward-region IR on ABA missions.	W
PBAZ4R(KBA,IR)	Percent Blue type-KBA aircraft sent from Blue COMMZ to Red rear-region IR on ABA missions.	W
PBAZ4Z(KBA)	Percent Blue type-KBA aircraft sent from Blue COMMZ to Red COMMZ on ABA missions.	W
PBAZ5F(KBA,IR)	Percent Blue type-KBA aircraft sent from Blue COMMZ to Red forward-region IR on ABAE missions.	W
PBAZ5R(KBA,IR)	Percent Blue type-KBA aircraft sent from Blue COMMZ to Red rear-region IR on ABAE missions.	W
PBAZ5Z(KBA)	Percent Blue type-KBA aircraft sent from Blue COMMZ to Red COMMZ on ABAE missions.	W
PBAZ6(KBA)	Percent Blue type-KBA aircraft from Blue COMMZ on ABD missions.	W
PBAZ7F(KBA,IR)	Percent Blue type-KBA aircraft from Blue COMMZ on IDR missions.	W
PBA1(KBA)	Percent Blue type-KBA aircraft assigned to CAS missions. (RPAC,8215)	I
PBA2(KBA)	Percent Blue type-KBA aircraft assigned to CASE missions. (RPAC,8216)	I

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Variable Name	Definition	Type
PBA3(KBA)	Percent Blue type-KBA aircraft assigned to BD missions. (RPAC,8217)	I
PBA4(KBA)	Percent Blue type-KBA aircraft assigned to ABA missions. (RPAC,8218)	I
PBA5(KBA)	Percent Blue type-KBA aircraft assigned to ABAE missions. (RPAC,8219)	I
PBA6(KBA)	Percent Blue type-KBA aircraft assigned to ABD missions. (RPAC,8220)	I
PBA7(KBA)	Percent Blue type-KBA aircraft assigned to IDR missions. (RPAC,8227)	I
PBCSSD(KBD)	Percent Blue casualties that are combat-service-support personnel in a type-KBD division. (RPTZ, 3310)	I
PBDKRP(KP,KBW,KRW)	Percent Red type-KRW weapons that one Blue type-KBW weapon kills when Blue is on defense in posture KP (Blue kills Red). (Here KP = 1 or 2 only.)	W
PBDM	Percent Blue divisions moved.	W
PBNCAP(KP)	Percent Blue nonbattle casualties when Blue is on attack in posture KP. (RPTZ,7130)	I
PBNCDP(KP)	Percent Blue nonbattle casualties when Blue is on defense in posture KP. (RPTZ,7135)	I
PBNCR	Percent Blue nonbattle casualties in region. (RPTZ,7140)	I
PBNCZ	Percent Blue nonbattle casualties in COMMZ (includes divisions, pools, and support personnel). (RPTZ,7140)	I
PBWLRA(KBW,KP)	Percent Blue type-KBW weapons lost that can be retrieved and repaired while Blue is attacking in posture KP. (RPTZ,5080)	I
PBWLRD(KBW,KP)	Percent Blue type-KBW weapons lost that can be retrieved and repaired while Blue is defending in posture KP. (RPTZ,5090)	I
PBWLRH(KBW)	Percent Blue type-KBW weapons lost that can be retrieved and repaired while Blue is holding. (RPTZ,5060)	I

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Variable Name	Definition	Type
PBWLSA(KBW)	Percent Blue type-KBW weapons lost in sector J while Blue is on attack (as a percent of total Blue weapons lost in sector J).	W
PBWLSD(KBW)	Percent Blue type-KBW weapons that were lost in sector J while Blue is on defense (as a percent of total Blue weapons lost in sector J).	W
PBWRRR(KBW)	Percent Blue type-KBW weapons that have been re-trieved that can be repaired and replaced in a day. (RPTZ,5040)	I
PBWS(KBW)	Protected Blue type-KBW weapons in the sector.	W
PBWSF(KBW)	Percent Blue weapons in a standard force (PBWSF(KBW) > 0 for all KBW). (RPTZ,3350)	I
PCASS(J)	Percent CAS sorties assigned to sector J.	W
PCBAFX(IPCBAF)	(See NPCBAF.) (RPTZ,8065)	I
PCBAFY(KP,IPCBAF)	(See NPCBAF.) (RPTZ,8070)	I
PCBAYS(IPCBAF)	The section of PCBAFY(KP,IPCBAF) for the KP under consideration.	W
PCBDFX(IPCBDF)	(See NPCBDF.) (RPTZ,8080)	I
PCBDFY(KP,IPCBDF)	(See NPCBDF.) (RPTZ,8085)	I
PCBDYS(IPCBDF)	The section of PCBDFY(KP,IPCBDF) for the KP under consideration.	W
PCBHFX(IPCBHF)	(See NPCBHF.) (RPTZ,8087)	I
PCBHFY(IPCBHF)	(See NPCBHF.) (RPTZ,8088)	I
PCBS(J)	Percent casualties to Blue in sector J.	W
PCRAFX(IPCRAF)	(See NPCRAF.) (RPTZ,8095)	I
PCRAFY(KP,IPCRAF)	(See NPCRAF.) (RPTZ,8100)	I
PCRAYS(IPCRAF)	The section of PCRAFY(KP,IPCRAF) for the KP under consideration.	W
PCRDFX(IPCRDF)	(See NPCRDF.) (RPTZ,8110)	I
PCRDFY(KP,IPCRDF)	(See NPCRDF.) (RPTZ,8115)	I

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Variable Name	Definition	Type
PCRDYS(IPCRDF)	The section of PCRDFY(KP,IPCRDF) for the KP under consideration.	W
PCRHFX(IPCRHF)	(See NPCRHF.) (RPTZ,8117)	I
PCRHFY(IPCRHF)	(See NPCRHF.) (RPTZ,8118)	I
PCRS(J)	Percent casualties to Red in sector J.	W
PDBANG(KBA)	Percent of a day that a Blue type-KBA aircraft is not on the ground. (RPAC,8285)	I
PDFBA2	Percentage that determines how much of the intermediate delta FEBAs are to be used in method 2.	W
PDRANG(KRA)	Percent of a day that a Red type-KRA aircraft is not on the ground. (RPAC,8286)	I
PK	(See ATTRIT.)	W
PNBD(KBD)	Percent of a notional Blue division that a type-KBD division is. (RPTZ,3270)	I
PNRD(KRD)	Percent of a notional Red division that a type-KRD division is. (RPTZ,3280)	I
PPESE	Percent of people that are affected by the enemy's firepower when supply limitations are considered. The percentage value is computed as the maximum of each side's percent level of effectiveness based on supply availability.	W
PRAAGM(KRA)	Passes made by Red type-KRA aircraft on air-to-ground missions. (RPAC,8279)	I
PRAAKB(KRA,KBW)	Percent Blue type-KBW weapons that one Red type-KRA kills aircraft when Red is on attack (Red kills Blue).	W
PRAAS(KRA)	Percent Red type-KRA aircraft on ABA missions assigned to suppression. (RPAC,8233)	I
PRACS(KRA)	Percent remaining Red type-KRA aircraft assigned to suppression after the minimum number of CAS attackers are assigned to attack missions. (RPAC,8231)	I
PRADKB(KRA,KBW)	Percent Blue type-KBW weapons that one Red type-KRA aircraft kills when Red is on defense (Red kills Blue).	W

Variable Name	Definition	Type
PRAF1(KRA,IR,J)	Percent Red type-KRA aircraft sent from forward-region IR to sector J on CAS attack missions.	W
PRAF2(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red forward-region IR to sector J on CASE missions.	W
PRAF3(KRA,IR)	Percent Red type-KRA aircraft sent from Red forward-region IR to sector J on CAS defense missions.	W
PRAF4F(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red forward-region IR to Blue forward-region IB on ABA missions.	W
PRAF4R(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red forward-region IR to Blue rear-region IB on ABA missions.	W
PRAF4Z(KRA,IR)	Percent Red type-KRA aircraft sent from Red forward-region IR to Blue COMMZ on ABA missions.	W
PRAF5F(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red forward-region IR to Blue forward-region IR on ABAE missions.	W
PRAF5R(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red forward-region IR to Blue rear-region IR on ABAE missions.	W
PRAF5Z(KRA,IR)	Percent Red type-KRA aircraft sent from Red forward-region IR to Blue COMMZ on ABAE missions.	W
PRAF6(KRA,IR)	Percent Red type-KRA aircraft sent from Red forward-region IR on ABD missions.	W
PRAF7F(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red forward-region IR on IDR missions.	W
PRAKBP(KP,KRW,KBW)	Percent Blue type-KBW weapons that one Red type-KRW weapon kills when Red is on attack in posture KP (Red kills Blue). (Here KP = 1 or 2 only.)	W
PRAR1(KRA,IR,J)	Percent Red type-KRA aircraft sent from rear-region IR to sector J on CAS missions.	W
PRAR2(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red rear-region IR to sector J on CASE missions.	W

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Variable Name	Definition	Type
PRAR3(KRA,IR)	Percent Red type-KRA aircraft sent from Red rear-region IR to sector J on BD missions.	W
PRAR4F(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red rear-region IR to Blue forward-region IB on ABA missions.	W
PRAR4R(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red rear-region IR to Blue rear-region IB on ABA missions.	W
PRAR4Z(KRA,IR)	Percent Red type-KRA aircraft sent from Red rear-region IR to Blue COMMZ on ABA missions.	W
PRAR5F(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red rear-region IR to Blue forward-region IB on ABAE missions.	W
PRAR5R(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red rear-region IR to Blue rear-region IB on ABAE missions.	W
PRAR5Z(KRA,IR)	Percent Red type-KRA aircraft sent from Red rear-region IR to Blue COMMZ on ABAE missions.	W
PRAR6(KRA,IR)	Percent Red type-KRA aircraft sent from Red rear-region IR on ABD missions.	W
PRAR7F(KRA,IR,IB)	Percent Red type-KRA aircraft sent from Red rear-region IR on IDR missions.	W
PRAZ1(KRA,J)	Percent Red type-KRA aircraft sent from Red COMMZ to sector J on CAS missions.	W
PRAZ2(KRA,IB)	Percent Red type-KRA aircraft sent from Red COMMZ to sector J on CASE missions.	W
PRAZ3(KRA,IR)	Percent Red type-KRA aircraft sent from Red COMMZ to sector J on BD missions.	W
PRAZ4F(KRA,IB)	Percent Red type-KRA aircraft sent from Red COMMZ to Blue forward-region IB on ABA missions.	W
PRAZ4R(KRA,IB)	Percent Red type-KRA aircraft sent from Red COMMZ to Blue rear-region IB on ABA missions.	W
PRAZ4Z(KRA)	Percent Red type-KRA aircraft sent from Red COMMZ to Blue COMMZ on ABA missions.	W
PRAZ5F(KRA,IB)	Percent Red type-KRA aircraft sent from Red COMMZ to Blue forward-region IB on ABAE missions.	W

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Variable Name	Definition	Type
PRAZ5R(KRA,IB)	Percent Red type-KRA aircraft sent from Red COMMZ to Blue rear-region IB on ABAE missions.	W
PRAZ5Z(KRA)	Percent Red type-KRA aircraft sent from Red COMMZ to Blue COMMZ on ABAE missions.	W
PRAZ6(KRA)	Percent Red type-KRA aircraft sent from Red COMMZ on ABD missions.	W
PRAZ7F(KRA,IB)	Percent Red type-KRA aircraft sent from Red COMMZ on IDR missions.	W
PRA1(KRA)	Percent Red type-KRA aircraft assigned to CAS missions. (RPAC,8221)	I
PRA2(KRA)	Percent Red type-KRA aircraft assigned to CASE missions. (RPAC,8222)	I
PRA3(KRA)	Percent Red type-KRA aircraft assigned to BD missions. (RPAC,8223)	I
PRA4(KRA)	Percent Red type-KRA aircraft assigned to ABA missions. (RPAC,8224)	I
PRA5(KRA)	Percent Red type-KRA aircraft assigned to ABAE missions. (RPAC,8225)	I
PRA6(KRA)	Percent Red type-KRA aircraft assigned to ABD missions. (RPAC,8226)	I
PRA7(KRA)	Percent Red type-KRA aircraft assigned to IDR missions. (RPAC,8228)	I
PRBSRS	Percent reduction of Blue sortie rates due to supply shortage.	W
PRCSSD(KRD)	Percent Red casualties that are combat-service-support personnel in a type-KRD division. (RPTZ, 3320)	I
PRDKBP(KP,KRW,KBW)	Percent Blue type-KBA weapons that one Red type-KRW weapon kills when Red is on defense in posture KP (Red kills Blue). (Here KP = 1 or 2 only.)	W
PRDM	Percent Red divisions moved.	W
PRNCAP(KP)	Percent Red nonbattle casualties when Red is on the attack in posture KP. (RPTZ,7145)	I

Variable Name	Definition	Type
PRNCDP(KP)	Percent Red nonbattle casualties when Red is on defense in posture KP. (RPTZ,7150)	I
PRNCR	Percent Red nonbattle casualties in region. (RPTZ, 7155)	I
PRNCZ	Percent nonbattle casualties in COMMZ (includes divisions, pools, and support personnel). (RPTZ, 7155)	I
PRRSRS	Percent reduction of Red sortie rates due to supply shortage.	W
PRWLRA(KRW,KP)	Percent Red type-KRW weapons lost that can be re-trieved and repaired while Red is attacking in posture KP. (RPTZ,6000)	I
PRWLRD(KRW,KP)	Percent Red type-KRW weapons lost that can be re-trieved and repaired while Red is defending in posture KP. (RPTZ,6010)	I
PRWLRH(KRW)	Percent Red type-KRW weapons lost that can be re-trieved and repaired while Red is holding. (RPTZ, 5070)	I
PRWLSA(KRW)	Percent Red type-KRW weapons lost in sector J while Red is on attack (as a percent of total Red weapons lost in sector J).	W
PRWLSD(KRW)	Percent Red type-KRW weapons lost in sector J while Red is on defense (as a percent of total Red weapons lost in sector J).	W
PRWRRR(KRW)	Percent Red type-KRW weapons that have been retrieved that can be repaired and replaced in a day. (RPTZ, 5050)	I
PRWS(KRW)	Protected Red type-KRW weapons in the sector.	W
PRWSF(KRW)	Percent Red weapons in a standard force. (PRWSF(KRW) > 0 for all KRW). (RPTZ,3355)	I
PSBWDA(KBD)	Personnel strength at which Blue withdraws a type-KBD division on attack. (RPTZ,3695)	I
PSBWDD(KBD)	Personnel strength at which Blue withdraws a type-KBD division on defense. (RPTZ,3700)	I

Variable Name	Definition	Type
PSDR(KBD or KRD)	Percent strength of a type-KBD or type-KRD division in the region.	W
PSDS(KBD or KRD)	Percent strength of a type-KBD or type-KRD division in the sector.	W
PSRWDA(KRD)	Personnel strength at which Red withdraws a type-KRD division on attack. (RPTZ,3705)	I
PSRWDD(KRD)	Personnel strength at which Red withdraws a type-KRD division on defense. (RPTZ,3710)	I
PSUBIS(J)	Percent Red supplies unshipped due to each Blue interdiction sortie in sector J. (RPTZ,3756)	I
PSURIS(J)	Percent Blue supplies unshipped due to each Red interdiction sortie in sector J. (RPTZ,3755)	I
PTII	Percent time in initial interval.	W
R(KBW,KRW) (N,L)	Matrix used to store the product of two matrices. (see MPROD and EIGENV).	W
RAABNS	Red aircraft that attack each Blue nonsheltered aircraft before any Red aircraft attack shelters. (RPAC,8298)	I
RAANSA	Red aircraft attacking nonsheltered Blue aircraft.	W
RACA(KRA,J)	Red type-KRA aircraft on CAS missions in sector J.	W
RACAK(KRA,J)	Red type-KRA aircraft killed on CAS missions in sector J.	W
RACD(KRA,IR)	Red type-KRA aircraft on BD missions in region IR.	W
RACDK(KRA,IR)	Red type-KRA aircraft killed on BD missions in region IR.	W
RACE(KRA,IB)	Red type-KRA aircraft on CASE missions in region IB.	W
RACEK(KRA,IB)	Red type-KRA aircraft killed on CASE missions in region IB.	W
RACG(KRA,J)	Red type-KRA aircraft on CAS AAA-suppression missions in sector J.	W
RACGK(KRA,J)	Red type-KRA aircraft killed on CAS AAA-suppression missions in sector J.	W

Variable Name	Definition	Type
RACS(KRA,J)	Red type-KRA aircraft on CAS SAM-suppression missions in sector J.	W
RACSK(KRA,J)	Red type-KRA aircraft killed on CAS SAM-suppression missions in sector J.	W
RAEFX(IRAEF)	(See NRAEF.) (RPTZ,8035)	I
RAEFY(KRD,IRAEF)	(See NRAEF.) (RPTZ,8040)	I
RAEFYS(IRAEF)	Section of RAEFY(KRD,IRAEF) for the KRD under consideration.	W
RAFA(KRA,IB)	Red type-KRA aircraft sent to forward-region IB on ABA missions.	W
RAFAK(KRA,IB)	Red type-KRA aircraft killed that were sent to forward-region IB on ABA missions.	W
RAFAT(KRA,IB)	Temporary value for Red type-KRA aircraft on ABA missions in Blue forward-region IB.	W
RAFBCA	Weighted number of Red aircraft facing Blue at which Blue flies CAS (instead of ABA) missions (at or below this value, Blue will fly CAS missions only). (RPAC,8294)	I
RAFD(KRA,IR)	Red type-KRA aircraft in forward-region IR on ABD missions.	W
RAFDK(KRA,IR)	Red type-KRA aircraft killed in forward-region IR on ABD missions.	W
RAFE(KRA,IB)	Red type-KRA aircraft sent to forward-region IB on ABAE missions.	W
RAFEK(KRA,IB)	Red type-KRA aircraft killed that were sent to forward-region IB on ABAE missions.	W
RAFG(KRA,IB)	Red type-KRA aircraft sent to forward-region IB on ABA AAA-suppression missions.	W
RAFGK(KRA,IB)	Red type-KRA aircraft killed that were sent to forward-region IB on ABA AAA-suppression missions.	W
RAFR(KRA,IR)	Red type-KRA aircraft in forward-region IR. (RFTZ, 2150)	I

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Variable Name	Definition	Type
RAFRN(IR)	Red aircraft in forward-region IR that are not sheltered.	W
RAFRNK(IR)	Red aircraft in forward-region IR that are not sheltered and are killed.	W
RAFRS(IR)	Red aircraft in forward-region IR that are sheltered.	W
RAFRSK(IR)	Red aircraft in forward-region IR that are sheltered and are killed.	W
RAFS(KRA,IB)	Red type-KRA aircraft sent to Blue forward-region IB on ABA SAM-suppression missions.	W
RAFSK(KRA,IB)	Red type-KRA aircraft killed that were sent to Blue forward-region IB on ABA SAM-suppression missions.	W
RAGFR(IR)	Red AAA in forward-region IR. (RFTZ,2135)	I
RAGRFK(IR)	Red AAA killed in forward-region IR.	W
RAGRR(IR)	Red AAA in rear-region IR. (RFTZ,2140)	I
RAGRRK(IR)	Red AAA killed in rear-region IR.	W
RAGZ	Red AAA in COMMZ. (RFTZ,2145)	I
RAGZK	Red AAA killed in COMMZ.	W
RAIDR(KRA,IB)	Red type-KRA aircraft sent to Blue region IB on IDR missions.	W
RAIDRK(KRA,IB)	Red type-KRA aircraft killed on IDR missions in Blue region IB.	W
RAIDRT(KRA,IB)	Temporary value for Red type-KRA aircraft on IDR missions in Blue region IB.	W
RAISR(KRA,IB)	Red type-KRA aircraft on supply-interdiction missions in region IB.	W
RAKBP(KRA)	Scoreboard for Red type-KRA aircraft killing Blue people.	W
RAKSB(KRA,KBW)	Scoreboard for Red type-KRA aircraft killing Blue type-KBW weapons.	W

Variable Name	Definition	Type
RAMKAB(KRAM,KBW)	The actual number of Blue type-KBW ground weapons killed by each Red type-KRAM air munition if it were fired at Blue type-KBW weapons from Red aircraft on IDR missions. (RPTZ,3247)	I
RAMNLA(KRA,KRAM)	Amount of Red type-KRAM air munition in a notional load carried by a Red type-KRA aircraft when Red is on attack. (RPTZ,3255)	I
RAMNLD(KRA,KRAM)	Amount of Red type-KRAM air munition in a notional load carried by a Red type-KRA aircraft when Red is on defense. (RPTZ,3256)	I
RAPE	Red attack percent effectiveness.	W
RAPEDS	Red attack percent effectiveness of a type of division in the sector.	W
RARA(KRA,IB)	Red type-KRA aircraft sent to Blue rear-region IB on ABA missions.	W
RARAK(KRA,IB)	Red type-KRA aircraft killed that were sent to Blue rear-region IB on ABA missions.	W
RARAT(KRA,IB)	Temporary value for Red type-KRA aircraft on ABA missions in Blue rear-region IB.	W
RARD(KRA,IR)	Red type-KRA aircraft in Red rear-region IR on ABD missions.	W
RARDK(KRA,IR)	Red type-KRA aircraft killed in Red rear-region IR on ABD missions.	W
RARE(KRA,IB)	Red type-KRA aircraft sent to Blue rear-region IB on ABAE missions.	W
RAREK(KRA,IB)	Red type-KRA aircraft killed that were sent to Blue rear-region IB on ABAE missions.	W
RARG(KRA,IB)	Red type-KRA aircraft sent to Blue rear-region IB on ABA AAA-suppression missions.	W
RARGK(KRA,IB)	Red type-KRA aircraft killed that were sent to Blue region IB on ABA AAA-suppression missions.	W
RARR(KRA,IR)	Red type-KRA aircraft in rear-region IR. (RFTZ, 2160)	I

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Variable Name	Definition	Type
RARRN(IR)	Red aircraft in rear-region IR that are not sheltered.	W
RARRNK(IR)	Red aircraft in rear-region IR that are not sheltered and are killed.	W
RARRS(IR)	Red aircraft in rear-region IR that are sheltered.	W
RARRSK(IR)	Red aircraft in rear-region IR that are sheltered and are killed.	W
RARS(KRA,IB)	Red type-KRA aircraft sent to Blue rear-region IB on ABA SAM-suppression missions.	W
RARSK(KRA,IB)	Red type-KRA aircraft killed that were sent to Blue rear-region IB on ABA SAM-suppression missions.	W
RAS(KRA,J)	Red type-KRA aircraft that are contributing to CAS missions in sector J.	W
RASHT(KRA)	Red aircraft sheltered according to priority type-KRA sheltering.	W
RAWVDZ	Red (attack) weapons value of one particular type of division in COMMZ.	W
RAWVS(J)	Red (attack) weapons value in sector J.	W
RAWVSR	Red (attack) weapons value in all sectors and regions.	W
RAWVT	Red (attack) weapons value in theater (total value assuming posture KP = 1).	W
RAWVZ	Red (attack) weapons value in COMMZ.	W
RAZ(KRA)	Red type-KRA aircraft in COMMZ. (RFTZ,2170)	I
RAZA(KRA)	Red type-KRA aircraft sent to Blue COMMZ on ABA missions.	W
RAZAK(KRA)	Red type-KRA aircraft killed that were sent to Blue COMMZ on ABA missions.	W
RAZAT(KRA)	Temporary value for Red type-KRA aircraft on attack missions in Blue COMMZ.	W
RAZD(KRA)	Red type-KRA aircraft sent to Blue COMMZ on ABD missions.	W

Variable Name	Definition	Type
RAZDK(KRA)	Red type-KRA aircraft killed that were sent to Blue COMMZ on ABD missions.	W
RAZE(KRA)	Red type-KRA aircraft sent to Blue COMMZ on ABAE missions.	W.
RAZEK(KRA)	Red type-KRA aircraft killed that were sent to Blue COMMZ on ABAE missions.	W
RAZG(KRA)	Red type-KRA aircraft sent to Blue COMMZ on ABA AAA-suppression missions.	W
RAZGK(KRA)	Red type-KRA aircraft killed that were sent to Blue COMMZ on ABA AAA-suppression missions.	W
RAZN	Red aircraft in COMMZ that are not sheltered.	W
RAZNK	Red aircraft in COMMZ that are not sheltered and are killed.	W
RAZS(KRA)	Red type-KRA aircraft sent to Blue COMMZ on ABA SAM-suppression missions.	W
RAZSH	Red aircraft in COMMZ that are sheltered.	W
RAZSHK	Red aircraft in COMMZ that are sheltered and are killed.	W
RAZSK(KRA)	Red type-KRA aircraft killed that were sent to Blue COMMZ on AAA SAM-suppression missions.	W
RBPC	Red-over-Blue percent casualties.	W
RBPCS(J)	Red-over-Blue percent casualties in sector J.	W
RCR(IR)	Red casualties in region IR due to IDR missions.	W
RCRPH(KRP)	Red consumption rate for type-KRP people in a holding posture. (RPTZ,3640)	I
RCRPP(KRP,KP)	Red consumption rate for type-KRP people in posture KP. (RPTZ,3650)	I
RCRPR(KRP)	Red consumption rate for type-KRP people in the regions. (RFTZ,3460)	I
RCRRPZ	Red consumption rate for replacement people in COMMZ. (RPTZ,3560)	I

Variable Name	Definition	Type
RCRRWZ(KRW)	Red consumption rate for type-KRW replacement weapons in COMMZ. (RPTZ,3580)	I
RCRSPZ	Red consumption rate for support personnel in COMMZ. (RPTZ,3540)	I
RCRW(KRW)	Red consumption rate for type-KRW weapons.	W
RCRWH(KRW)	Red consumption rate for type-KRW weapons in holding posture. (RPTZ,3660)	I
RCRWP(KRW,KP)	Red consumption rate for type-KRW in posture KP. (RPTZ,3670)	I
RCRWR(KRW)	Red consumption rate for type-KRW weapons in reserve. (RPTZ,3480)	I
RCS(J)	Red casualties in sector J $$= \sum_{KRP} RPLS(KRP,J).$$	W
RCWI(KRW)	Index for Red weapons $$= \begin{cases} 1.0, & \text{if KRW is a "combat" weapon;} \\ 0.0, & \text{if KRW is a "combat support" weapons.} \end{cases}$$ (RPTZ,3300)	I
RDAD(L)	Red detection probability by attackers of Blue defenders, given L. (RPAC,8246)	I
RDAN	Red detection probability by ABA attackers of Blue nonshelters. (RPAC,8250)	I
RDAS	Red detection probability by ABA attackers of Blue shelters. (RPAC,8250)	I
RDDAC(L)	Red detection probability by defenders defending combat sectors of Blue attackers, given L. (RPAC,8342)	I
RDDAF(L)	Red detection probability by defenders defending in forward region of Blue attackers, given L. (RPAC,8343)	I
RDDAR(L)	Red detection probability by defenders defending in rear region of Blue attackers, given L. (RPAC,8344)	I
RDDAZ(L)	Red detection probability by defenders defending in COMMZ of Blue attackers, given L. (RPAC,8345)	I

Variable Name	Definition	Type
RDDEC(L)	Red detection probability by defenders defending combat sectors of Blue escorts, given L. (RPAC,8244)	I
RDDEF(L)	Red detection probability by defenders defending in forward regions of Blue escorts, given L. (RPAC, 8245)	I
RDDER(L)	Red detection probability by defenders defending in rear regions of Blue escorts, given L. (RPAC,8247)	I
RDDEZ(L)	Red detection probability by defenders defending in COMMZ of Blue escorts, given L. (RPAC,8248)	I
RDED(L)	Red detection probability by escorts of Blue defenders, given L. (RPAC,8243)	I
RDEFX(IRDEF)	(See NRDEF.) (RPTZ,8050)	I
RDEFY(KRD,IRDEF)	(See NRDEF.) (RPTZ,8055)	I
RDEFYS(IRDEF)	Section of RDEFY(KRD,IRDEF) for the KRD under consideration.	W
RDGC(L)	Red detection probability by AAA in combat sector, given L. (RPAC,8350)	I
RDGF(L)	Red detection probability by AAA in forward regions, given L. (RPAC,8351)	I
RDGG	Red detection probability by Red AAA-suppressors of Blue AAGs. (RPAC,8249)	I
RDGR(L)	Red detection probability by AAA in rear regions, given L. (RPAC,8352)	I
RDGZ(L)	Red detection probability by AAA in COMMZ, given L. (RPAC,8353)	I
RDPE	Red defense percent effectiveness.	W
RDPEDS	Red defense percent effectiveness of a type of division in a sector.	W
RDR	Supplies that region demands from region.	W
RDSC(L)	Red detection probability by SAMs in combat sectors, given L. (RPAC,8346)	I

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Variable Name	Definition	Type
RDSF(L)	Red detection probability by SAMs in forward regions, given L. (RPAC,8347)	I
RDSR(L)	Red detection probability by SAMs in rear regions, given L. (RPAC,8348)	I
RDSRDR	Red days of supply in region for divisions in region. (RPTZ,2430)	I
RDSRDS	Red days of supply in region for divisions in sector. (RPTZ,2420)	I
RDSRPZ	Red days of supply for replacement people in COMMZ. (RPTZ,2480)	I
RDSRWZ	Red days of supply for replacement weapons in COMMZ. (RPTZ,2490)	I
RDSS	Red detection probability by SAM-suppressors of Blue SAMs. (RPAC,8249)	I
RDSSDS	Red days of supply in sector for divisions in sector. (RPTZ,2410)	I
RDSSPZ	Red days of supply for support personnel in COMMZ. (RPTZ, 2470)	I
RDSZ(L)	Red detection probability by SAMs in COMMZ, given L. (RPAC,8349)	I
RDSZDR	Red days of supply in COMMZ for divisions in region. (RPTZ,2450)	I
RDSZDS	Red days of supply in COMMZ for divisions in sector. (RPTZ,2440)	I
RDSZDZ	Red days of supply in COMMZ for divisions in COMMZ. (RPTZ,2460)	I
RDWVDZ	Red (defense) weapons value in one particular type of division in COMMZ.	W
RDWVS(J)	Red (defense) weapons value in sector J.	W
RDWVSR	Red (defense) weapons value in all sectors and regions.	W
RDWVT	Red (defense) weapons value in theater--total.	W
RDWVZ	Red (defense) weapons value in COMMZ.	W

Variable Name	Definition	Type
RDZ	Supplies that the region demands from the COMMZ.	W
RFMFX(IRFMF)	(See NRFMF.) (RPTZ,8140)	I
RFMFY(KP,KT,IRFMF)	(See NRFMF.) (RPTZ,8145)	I
RFMFYS(IRFMF)	Section of RFMFY(KP,KT,IRFMF) for the KP,KT under consideration.	W
RFWFSP(J,KP)	Red-over-Blue force ratio above which Red (on attack) withdraws divisions from sector J, provided that J is a sector of main attack and is constrained by front-to-flank ratio and is in posture KP. (RPTZ,3717)	I
RGKBP(KRW)	Scoreboard for Red type-KRW ground weapons killing Blue people.	W
RGKBS(KRW,KBW)	Scoreboard for Red type-KRW ground weapons killing Blue type-KBW ground weapons.	W
RGS(J)	Red AAA in combat sector J.	W
RGSK(J)	Red AAA killed in combat sector J.	W
RGSR(IR)	Red general supplies in region IR. (RFTZ,2240)	I
RGSRUR(IR)	Red general supplies in region IR for use in region IR. (RFTZ,2245)	I
RGSS(J)	Red general supplies in sector J. (RFTZ,2230)	I
RGSSR(IR)	Red general supply shortage in region IR.	W
RGSSS(J)	Red general supply shortage in sector J.	W
RGSSZ	Red general supply shortage in COMMZ.	W
RGSZ	Red general supplies in COMMZ. (RFTZ,2250)	I
RGSZUZ	Red general supplies in COMMZ for use in COMMZ. (RFTZ,2255)	I
RKAD(KRA,KBA)	Probability that a Red type-KRA attacker kills a Blue type-KBA defender. (RPAC,8268)	I
RKAN(KRA)	Probability that a Red type-KRA ABA-attacker kills Blue nonsheltered aircraft. (RPAC,8274)	I

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Variable Name	Definition	Type
RKAS(KRA)	Probability that a Red type-KRA ABA-attacker kills Blue sheltered aircraft. (RPAC,8273)	I
RKDA(KRA,KBA)	Probability that a Red type-KRA defender kills a Blue type-KBA attacker. (RPAC,8267)	I
RKDE(KRA,KBA)	Probability that a Red type-KRA defender kills a Blue type-KBA escort. (RPAC,8266)	I
RKED(KRA,KBA)	Probability that a Red type-KRA escort kills a Blue type-KBA defender. (RPAC,8265)	I
RKG(KBA)	Probability that a Red AAA kills a Blue type-KBA aircraft. (RPAC,8270)	I
RKGG(KRA)	Probability that a Red type-KRA AAA-suppressor kills a Blue AAG. (RPAC,8272)	I
RKS(KBA)	Probability that a Red SAM kills a Blue type-KBA aircraft. (RPAC,8269)	I
RKSS(KRA)	Probability that a Red type-KRA SAM-suppressor kills a Blue SAM. (RPAC,8271)	I
RL	Reserve level.	W
RLBAFF	Desired reserve level for Blue if Blue is on attack and the advance in a main attack sector is constrained by the front-to-flank ratio. (RPTZ,3940)	I
RLBAP(KP)	Desired reserve level for Blue if Blue is on attack and posture in sector of main attack is KP. (RPTZ,3900)	I
RLBDFM	Desired reserve level for Blue if Blue is on defense and maximum force ratio is exceeded in some sector. (RPTZ, 3950)	I
RLBDP(KP)	Desired reserve level for Blue if Blue is on defense and posture in sector of maximum FEBA advance is KP. (RPTZ, 3910)	I
RLRAFF	Desired reserve level for Red if Red is on attack and advance in a main attack sector is constrained by the front-to-flank ratio. (RPTZ,3940)	I
RLRAP(KP)	Desired reserve level for Red if Red is on attack and posture in sector of main attack is KP. (RPTZ,3920)	I

Variable Name	Definition	Type
RLRDFM	Desired reserve level for Red if Red is on defense and maximum force ratio is exceeded in some sector. (RPTZ,3950)	I
RLRDP(KP)	Desired reserve level for Red if Red is on defense and posture in sector of maximum FEBA advance is KP. (RPTZ,3930)	I
RMABAS	Red minimum number of ABA sorties before flying suppression. (RPAC,8281)	I
RMCASS	Red minimum number of CAS sorties before flying suppression. (RPAC,8280)	I
RMFAS(J)	Red minimum front for air support in sector J. (RPTZ,3348)	I
RMFDPT(KRD,KP,KT)	Red mobility factor for a type-KRD division attacking posture KP in terrain KT (needed only if MCRM = 2, 3, or 4). (RPTZ,3340)	I
RMFS	Red mobility factor in the sector	W

$$RMFS = \begin{cases} 1.0, & \text{if } MCRM = 1; \\[6pt] \min_{KRD}\ \{RMFDPT(KRD,KP,KT)\,|\,NRDS(KRD,J) > 0\}, & \text{if } MCRM = 2; \\[6pt] \max_{KRD}\ \{RMFDPT(KRD,KP,KT)\,|\,NRDS(KRD,J) > 0\}, & \text{if } MCRM = 3; \\[6pt] \sum_{KRD=1}^{NKRD} \dfrac{RMFDPT(KRD,KP,KT) * NRDS(KRD,J) * PNRD(KRD)}{RTDS}, & \text{if } MCRM = 4. \end{cases}$$

Variable Name	Definition	Type
RMRSDA(KRD)	Red minimum reinforcement strength for type-KRD division on attack. (RPTZ,3685)	I
RMRSDD(KRD)	Red minimum reinforcement strength for type-KRD division on defense. (RPTZ,3690)	I
RMSPSA	Red maximum number of SAM-suppression sorties per SAM (ABA mission). (RPAC,8283)	I
RMSPSC	Red maximum number of SAM-suppression sorties per SAM (CAS mission). (RPAC,8282)	I
RNR(IR or IB)	Supplies that the region needs from the region.	W
RPARS	Total actual Red people in regions and sectors.	W

Variable Name	Definition	Type
RPCRPR(KRP)	Red planned consumption rate for type-KRP people in reserve. (RPTZ,7060)	I
RPCRPS(KRP)	Red planned consumption rate for type-KRP people in sector. (RPTZ,7020)	I
RPCRRP	Red planned consumption rate for replacement people. (RPTZ,7100)	I
RPCRRW(KRW)	Red planned consumption rate for type-KRW replacement weapons. (RPTZ,7120)	I
RPCRSP	Red planned consumption rate for support people. (RFTZ,7090)	I
RPCRWR(KRW)	Red planned consumption rate for type-KRW weapons in reserve. (RPTZ,7080)	I
RPCRWS(KRW)	Red planned consumption rate for weapons of KRW in sector. (RPTZ,7040)	I
RPDR(KRP,KRD,IR)	Red type-KRP people in type-KRD divisions in region IR. (RFTZ,2070)	I
RPDS(KRP,KRD,J)	Red type-KRP people in type-KRD divisions in sector J. (RFTZ,2060)	I
RPDZ(KRP,KRD)	Red type-KRP people in type-KRD divisions in COMMZ. (RFTZ,2080)	I
RPLDS(KRP,KRD)	Red people lost in division and sector.	W
RPP	Percent Red personnel strength (total of actual over total TOE).	W
RPWLA(KRW)	Total Red people lost for each Red type-KRW weapon lost while Red in on attack.	W
RPWLAM(KRW,KBAM)	Red personnel lost when a type-KBAM air munition kills a type-KRW Red weapon (Red on attack). (RPTZ, 3410)	I
RPWLAW(KRW,KBW)	Red personnel lost when a type-KBW Blue weapon kills a type-KRW Red weapon (Red on attack). (RPTZ,3430)	I
RPWLD(KRW)	Total Red people lost for each Red type-KRW weapon lost while Red is on defense.	W

Variable Name	Definition	Type
RPWLDM(KRW,KBAM)	Red personnel lost when a type-KBAM air munition kills a type-KRW Red weapon (Red on defense). (RPTZ,3420)	I
RPWLDS(KRW,KRD)	Total Red people lost for each Red type-KRW weapon lost in a type-KRD division in the sector.	W
RPWLDW(KRW,KBW)	Red personnel lost when a type-KBW Blue weapon kills a type-KRW Red weapon (Red on defense). (RPTZ,3440)	I
RRARS	Red replacements available to be assigned to all regions and sectors.	W
RRDR(KRD,IR)	Red replacements sent to all type-KRD divisions in region IR.	W
RRDS(KRD,J)	Red replacements sent to all type-KRD divisions in sector J.	W
RRLZ	Red desired reserve level in COMMZ.	W
RRLZAI(IRRL)	Red desired reserve level in COMMZ if FEBA is in interval IRRL and Red is on attack. (RPTZ,3820)	I
RRLZDI(IRRL)	Red desired reserve level in COMMZ if FEBA is in interval IRRL and Red is on defense. (RPTZ,3830)	I
RRPDR(KRP,KRD,IR)	Red type-KRP replacement people for all type-KRD divisions in region IR.	W
RRPDS(KRP,KRD,J)	Red type-KRP replacement people for all type-KRD divisions in sector J.	W
RRPF	Red replacement pipeline factor. (RPTZ,5010)	I
RRPZ	Red replacement people in COMMZ. (RFTZ,2180)	I
RRRAD(KRD)	Red replacement rate when Red in on attack for a type-KRD division. (RPTZ,6091)	I
RRRDD(KRD)	Red reorganization rate when Red is on defense for a type-KRD division. (RPTZ,7001)	I
RRWDR(KRW,KRD,IR)	Red type-KRW replacement weapons to all type-KRD divisions in region IR.	W
RRWDS(KRW,KRD,J)	Red type-KRW replacement weapons to all type-KRD divisions in sector J.	W

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Variable Name	Definition	Type
RRWN(KRW)	Red type-KRW replacement weapons that are needed.	W
RRWR(KRW)	Red type-KRW weapons that have been retrieved and are repairable.	W
RRWRZT(KRW)	Red type-KRW replacement weapons remaining in COMMZ pool after trial allocation.	W
RRWZ(KRW)	Red type-KRW replacement weapons in COMMZ. (RFTZ, 2190)	I
RSA	Minimum number of Red shelters or aircraft.	W
RSAFR(IR)	Red shelters for aircraft in forward-region IR.	W
RSAFRD(IR)	Red shelters for aircraft in forward-region IR destroyed.	W
RSAMFR(IR)	Red SAMs in forward-region IR. (RFTZ,2115)	I
RSAMRR(IR)	Red SAMs in rear-region IR. (RFTZ,2120)	I
RSAMZ	Red SAMs in COMMZ. (RFTZ,2125)	I
RSAMZK	Red SAMs in COMMZ killed.	W
RSARF(IR,IFPRS)	Red shelters for aircraft in region IR by FEBA position. (RFTZ,2172)	I
RSARR(IR)	Red shelters for aircraft in rear-region IR.	W
RSARRD(IR)	Red shelters for aircraft in rear-region IR destroyed.	W
RSAZ	Red shelters for aircraft in COMMZ.	W
RSAZD	Red shelters for aircraft in COMMZ destroyed.	W
RSBASI(KBA)	Red supplies lost (en route to sector) for each sortie of a Blue type-KBA aircraft on supply-interdiction missions. (RPTZ,3751)	I
RSBASR(KBA)	Red supplies lost for each sortie on a Blue type-KBA aircraft on supply-interdiction missions in regions. (RPTZ,3753)	I
RSCA(KRA)	Red supplies consumed per type-KRA aircraft per day (in tons). (RPAC,8296)	I

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Variable Name	Definition	Type
RSD	Red supply demand.	W
RSFBAK(KBA)	Average number of Red SAMs fired for each Blue type-KBA aircraft killed. (RPAC,8276)	I
RSFR(IR)	Red SAMs in forward-region IR $$= \text{RSAMFR(IR)} + \sum_{\text{KRD}} \text{RWDR(NKRW,KRD,IR)}.$$	W
RSFRK(IR)	Red SAMs killed in forward-region IR.	W
RSLBAC(KBA)	Red supplies lost (in sector) for each sortie of a Blue type-KBA aircraft on CAS attack. (RPTZ,3726)	I
RSLBWV(KBW)	Red supplies lost for each Blue type-KBW weapon in the battle. (RPTZ,3740)	I
RSPZ	Red people in support activities in COMMZ. (RFTZ, 2175)	I
RSRRK(IR)	Red SAMs in rear-region IR killed.	W
RSS(J)	Red SAMs in combat sector J.	W
RSSK(J)	Red SAMs in combat sector J killed.	W
RSUM(IADDR)	One-dimensional array used to transfer between sub-routines the two-dimensional arrays PRAKBP(KP,KRW,KBW) and PRDKBP(KP,KRW,KBW)—for fixed KP.	W
RTDS	Total weighted number of Red divisions in the sector $$= \begin{cases} \sum_{\text{KRD=1}}^{\text{NKRD}} \text{NRDS(KRD,J)} * \text{PNDR(KRD)}, & \text{if MCRM} = 4; \\ 0, & \text{otherwise.} \end{cases}$$	W
RTPDS	Total Red people in all type-KRD divisions in the sector.	W
RTPRDR(KRD,IR)	Total Red people and replacements in all type-KRD divisions in region IR.	W
RTPRDS(KRD,J)	Total Red people and replacements in all type-KRD divisions in sector J.	W

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Variable Name	Definition	Type
RWADR(KRW,KRD,IR)	Red type-KRW weapons available to type-KRD divisions in region IR.	W
RWADS(KRW,KRD,J)	Red type-KRW weapons available to type-KRD divisions in sector J.	W
RWANDR(KRW,KRD,IR)	Red type-KRW weapons available and needed by type-KRD divisions in region IR.	W
RWANDS(KRW,KRD,J)	Red type-KRW weapons available and needed by type-KRD divisions in sector J.	W
RWDR(KRW,KRD,IR)	Red type-KRW weapons in type-KRD divisions in region IR. (RFTZ,2100)	I
RWDS(KRW,KRD,J)	Actual Red type-KRW weapons in all type-KRD divisions in sector J. (RFTZ,2090)	I
RWDZ(KRW,KRD)	Red type-KRW weapons in type-KRD divisions in COMMZ. (RFTZ,2110)	I
RWGPG(KKRW,KRW)	Number of Red type-KKRW weapons in Group 1 or Group 2 required to protect a Red type-KRW weapon in Group 2 or Group 3. (RPTZ,3261)	I
RWLDS(KRW,KRD)	Red type-KRW weapons lost in type-KRD divisions in the sector.	W
RWLR(KRW,IR)	Red type-KRW weapons lost in region IR due to IDR missions.	W
RWLS(KRW)	Total Red type-KRW weapons lost.	W
RWNDR(KRW,KRD,IR)	Red type-KRW weapons still needed in type-KRD divisions in region IR.	W
RWNDS(KRW,KRD,J)	Red type-KRW weapons still needed in type-KRD divisions in sector J.	W
RWNT(KRW)	Red type-KRW weapons still needed after trial allocation.	W
RWRRDR(KRW,KRD,IR)	Red weapon replacement rate for a type-KRW weapon in a type-KRD division in region IR.	W
RWRRDS(KRW,KRD,J)	Red weapon replacement rate for a type-KRW weapon in a type-KRD division in sector J.	W

Variable Name	Definition	Type
RWS(KRW)	Actual Red type-KRW weapons in the sector.	W
RWVDS	Red weapons value in all type-KRD divisions in the sector.	W
S(I)	(See ATTRIT.)	W
SABMAR(KBAM,KRW)	Standard allocation of Blue type-KBAM air munitions in the attack against Red type-KRW weapons. (RPTZ, 3170)	I
SABMDR(KBAM,KRW)	Standard allocation of Blue type-KBAM air munitions in the defense against Red type-KRW weapons. (RPTZ, 3175)	I
SABWAR(KBW,KRW)	Standard allocation of Blue type-KBW weapons in the attack against Red type-KRW weapons. (RPTZ,3180)	I
SABWDR(KBW,KRW)	Standard allocation of Blue type-KBW weapons in the defense against Red type-KRW weapons. (RPTZ,3185)	I
SARMAB(KRAM,KBW)	Standard allocation of Red type-KRAM air munitions in the attack against Blue type-KBW weapons. (RPTZ,3190)	I
SARMDB(KRAM,KBW)	Standard allocation of Red type-KRAM air munitions in the defense against Blue type-KBW weapons. (RPTZ,3195)	I
SARWAB(KRW,KBW)	Standard allocation of Red type-KRW weapons in the attack against Blue type-KBW weapons. (RPTZ,3200)	I
SARWDB(KRW,KBW)	Standard allocation of Red type-KRW weapons in the defense against Blue type-KBW weapons. (RPTZ,3205)	I
SDR	Supplies that the sector demands from the region.	W
SDS	Supplies that the sector demands from the sector.	W
SDZ	Supplies that the sector demands from the COMMZ.	W
SEFB	Expression set equal to the supply-effectiveness factor for Blue as a function of DSHB.	W
SEFBFX(ISEFBF)	(See NSEFBF.) (RPTZ,8155)	I
SEFBFY(ISEFBF)	(See NSEFBF.) (RPTZ,8160)	I

Variable Name	Definition	Type
SEFR	Expression set equal to the supply-effectiveness factor for Red as a function of DSHR.	W
SEFRFX(ISEFRF)	(See NSEFRF.) (RPTZ,8170)	I
SEFRFY(ISEFRF)	(See NSEFRF.) (RPTZ,8175)	I
SHTS(KBA or KRA)	Total type-KBA or type-KRA shooters.	W
SMRDS(KBD or KRD)	The side's minimum reinforcement strength for a type-KBD or type-KRD division.	W
SRB1(KBA)	Sortie rate for Blue type-KBA aircraft sent on mission 1(CAS). (RPAC,8310)	I
SRB2(KBA)	Sortie rate for Blue type-KBA aircraft sent on mission 2(CASE). (RPAC,8311)	I
SRB3(KBA)	Sortie rate for Blue type-KBA aircraft sent on mission 3(BD). (RPAC,8312)	I
SRB4(KBA)	Sortie rate for Blue type-KBA aircraft sent on mission 4(ABA). (RPAC,8313)	I
SRB5(KBA)	Sortie rate for Blue type-KBA aircraft sent on mission 5(ABAE). (RPAC,8314)	I
SRB6(KBA)	Sortie rate for Blue type-KBA aircraft sent on mission 6(ABD). (RPAC,8315)	I
SRB7(KBA)	Sortie rate for Blue type-KBA aircraft on IDR missions. (RPAC,8322)	I
SRR1(KRA)	Sortie rate for Red type-KRA aircraft sent on mission 1(CAS). (RPAC,8316)	I
SRR2(KRA)	Sortie rate for Red type-KRA aircraft sent on mission 2(CASE). (RPAC,8317)	I
SRR3(KRA)	Sortie rate for Red type-KRA aircraft sent on mission 3(BD). (RPAC,8318)	I
SRR4(KRA)	Sortie rate for Red type-KRA aircraft sent on mission 4(ABA). (RPAC,8319)	I
SRR5(KPA)	Sortie rate for Red type-KRA aircraft sent on mission 5(ABAE). (RPAC,8320)	I

Variable Name	Definition	Type
SRR6(KRA)	Sortie rate for Red type-KRA aircraft sent on mission 6(ABD). (RPAC,8321)	I
SRR7(KRA)	Sortie rate for Red type-KRA aircraft on IDR missions. (RPAC,8323)	I
STOB(KBA)	Total number of Blue type-KBA airplanes killed by Red SAMs.	W
STOR(KRA)	Total number of Red type-KRA airplanes killed by Blue SAMs.	W
SUM	Dummy variable denoting a sum.	W
SUMM(KBA,KRA, KBAN,KRAM, KBW,KRW, IB, or IR)	Working variable used for summing on expression.	W
SUPM(KBA or KRA)	Type-KBA or type-KRA sorties on suppression mission.	W
T	(See ATTRIT.)	W
TABA	Total attacking Blue aircraft.	W
TAK	Total aircraft killed.	W
TARA	Total attacking Red aircraft.	W
TASM	Total aircraft sent on mission.	W
TBASAG	Temporary fraction of Blue aircraft assigned to suppression missions that attack AAA .	W
TBAWVD(KBD)	TOE Blue (attack) weapons value for one Blue type-KBD division.	W
TBCS	Total Blue casualties in sector.	W
TBDWVD(KBD)	TOE Blue (defense) weapons value for one Blue type-KBD division.	W
TBPARS	Total Blue TOE people in all regions and sectors.	W
TBPDS(J)	Total Blue people in divisions in sector J.	W

Variable Name	Definition	Type
TBRWDR(KBW,KBD,IB)	Trial Blue type-KBW replacement weapons to all type-KBD divisions in region IB.	W
TBRWDS(KBW,KBD,J)	Trial Blue type-KBW replacement weapons to all type-KBD divisions in sector J.	W
TBSAM	Total number of Blue SAMs in theater (number of missiles--not launchers). (RFTZ,1130)	I
TBCS	Tons of Blue supply consumed.	W
TBSCA	Tons of Blue supply consumed by air.	W
TBSL	Tons of Blue supply lost.	W
TBTPDR(KBD,IB)	Total Blue TOE people in all type-KBD divisions in region IB.	W
TBTPDS(KBD,J)	Total Blue TOE people in all type-KBD divisions in sector J.	W
TBWDR(KBW,KBD,IB)	TOE Blue type-KBW weapons in all type-KBD divisions in region IB.	W
TBWDS(KBW,KBD,J)	TOE Blue type-KBW weapons in all type-KBD divisions in sector J.	W
TBWS	Total Blue weapons in sector.	W
TBWVDS	TOE Blue weapons value in all type-KBD divisions in the sector.	W
TDCB	Tons of supplies consumed per day by Blue forces (based on planned consumption rates and actual strength).	W
TDCR	Tons of supplies consumed per day by Red forces (based on planned consumption rates and actual strength).	W
TGTS	Total targets.	W
TK1(KBA or KRA)	Total type-KBA or type-KRA aircraft killed.	W
TK2	Total aircraft killed.	W
TPBD(KBP,KBD)	TOE type-KBP people in Blue type-KBD divisions. (RFTZ,1040)	I

Variable Name	Definition	Type
TPRD(KRP,KRD)	TOE people of type-KRP in Red type-KRD divisions. (RFTZ,2040)	I
TRASAG	Temporary fraction of Red aircraft assigned to suppression missions that attack AAA .	W
TRAWVD(KRD)	TOE Red (attack) weapons value for one Red type-KRD division.	W
TRCS	Total Red casualties in sector.	W
TRDWVD(KRD)	TOE Red (defense) weapons value in one Red type-KRD division.	W
TRPARS	Total Red TOE people in all regions and sectors.	W
TRPDS(J)	Total Red people in divisions in sector J.	W
TRRWDR(KRW,KRD,IR)	Trial Red type-KRW replacement weapons to all type-KRD divisions in region IR.	W
TRRWDS(KRW,KRD,J)	Trial Red type-KRW replacement weapons to all type-KRD divisions in sector J.	W
TRSAM	Total Red SAMs in theater (number of missiles—not launchers). (RFTZ,2130)	I
TRSC	Tons of Red supply consumed.	W
TRSCA	Tons of Red supply consumed by air.	W
TRSL	Tons of Red supply lost.	W
TRTPDR(KRD,IR)	Total Red TOE people in all type-KRD divisions in region IR.	W
TRTPDS(KRD,J)	Total Red TOE people in all type-KRD divisions in sector J.	W
TRWDR(KRW,KRD,IR)	TOE Red type-KRW weapons in all type-KRD divisions in region IR.	W
TRWDS(KRW,KRD,J)	TOE Red type-KRW weapons in all type-KRD divisions in sector J.	W
TRWS	Total Red weapons in sector.	W
TRWVDS	TOE Red weapons value in all type-KRD divisions in the sector.	W

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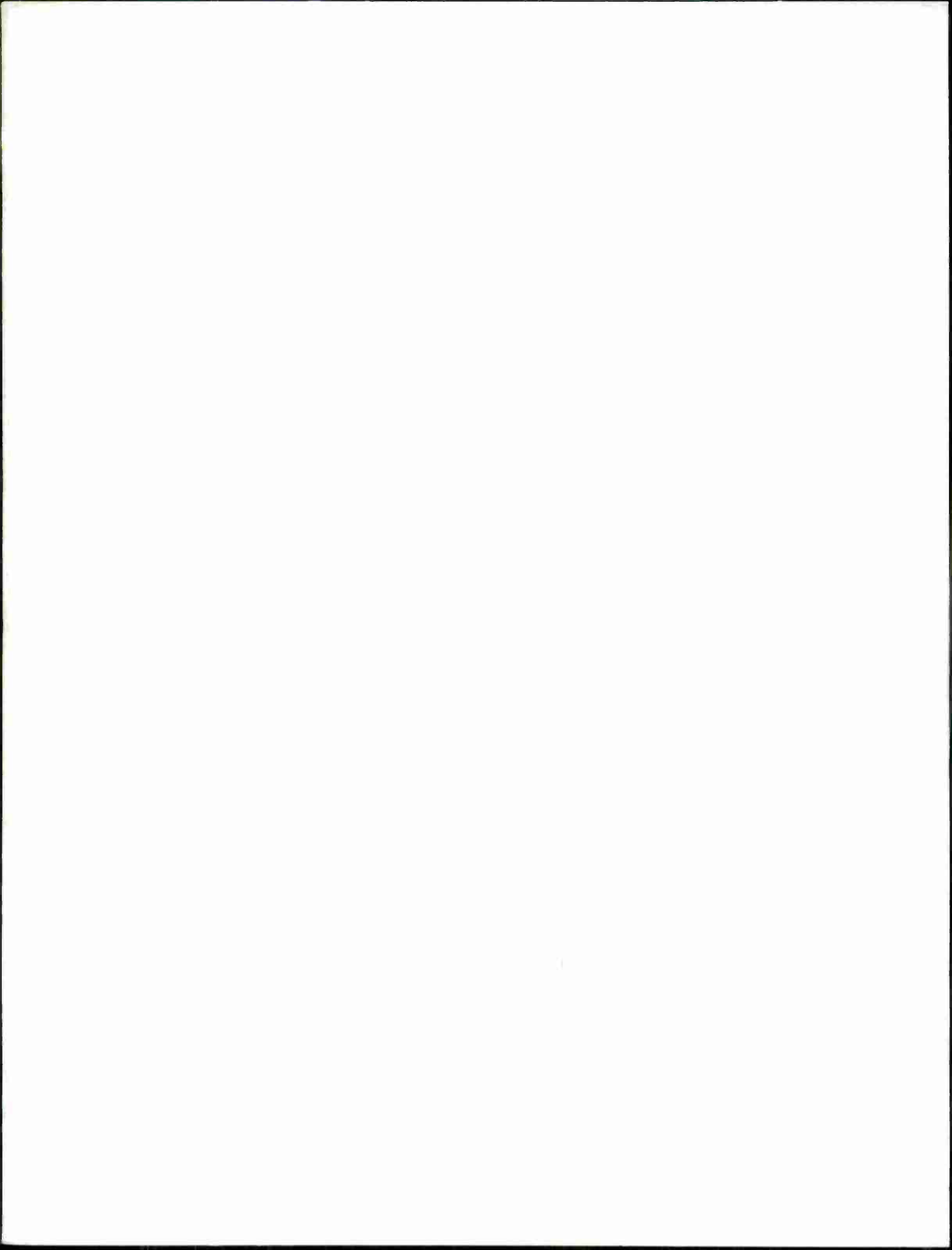| Variable Name	Definition	Type
TWBD(KBW,KBD)	TOE type-KBW weapons in all Blue type-KBD divisions. (RFTZ,1050)	I
TWRD(KRW,KRD)	TOE type-KRW weapons in all Red type-KRD divisions. (RFTZ,2050)	I
UBWDS(KBW,KBD)	Unprotected Blue type-KBW weapons in a type-KBD division in the sector.	W
URWDS(KRW,KRD)	Unprotected Red type-KRW weapons in a type-KRD division in the sector.	W
V(KBW)	Vector used to start the iterations for anti-potential potential (see EIGENV).	W
VB(KBW)	Subroutine eigenvector for value of Blue weapons (see EIGENV).	W
VBAAS	Value of Blue air forces in sector when Blue is on attack.	W
VBAASF(KBA)	Value of each Blue type-KBA aircraft against a standard force when Blue is on attack.	W
VBADS	Value of Blue air forces in sector when Blue is on defense.	W
VBADSF(KBA)	Value of each Blue type-KBA aircraft against a standard force when Blue is on defense.	W
VBAMAR(KBAM,KRW)	Value of a Blue type-KBAM air munition on attack against Red type-KRW targets. (RPTZ,3210)	I
VBAMDR(KBAM,KRW)	Value of a Blue type-KBAM air munition on defense against Red type-KRW targets. (RPTZ,3215)	I
VBAS(J)	Value of Blue air forces in sector J.	W
VBGAS	Actual combat value of Blue ground forces in sector J considering supply limitations when Blue is on attack.	W
VBGDS	Actual combat value of Blue ground forces in the sector considering supply limitations when Blue is on defense.	W
VBGS(J)	Value of Blue ground forces in sector J.	W

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Variable Name	Definition	Type
VBWARP(KP,KBW,KRW)	Value of an individual Blue type-KBW weapon on attack against Red type-KRW weapons. (KP = 1 indicates postures 1, 3, 4; KP = 2 indicates posture 2). (RPTZ,3220)	I
VBWASP(KBW,KP)	Value of Blue type-KBW weapon against a standard force when Blue is on attack and in posture KP. (Here KP = 1 or 2 only.)	W
VBWDRP(KP,KBW,KRW)	Value of an individual Blue type-KBW weapon on defense against Red type-KRW weapons. (KP = 1 indicates postures 1, 3, 4; KP = 2 indicates posture 2). (RPTZ,3225)	I
VBWDSP(KBW,KP)	Value of a Blue type-KBW weapon against a standard force when Blue is on defense and in posture KP. (Here KP = 1 or 2 only.)	W
VIBAA(KBA)	Value of a successful Blue CAS type-KBA sortie if Blue is on attack.	W
VIBAD(KBA)	Value of a successful Blue CAS type-KBA sortie if Blue is on defense.	W
VIBWAP(KBW,KP)	Value of an individual Blue type-KBW weapon when Blue is on attack in posture KP. (Here KP = 1 or 2 only.)	W
VIBWDP(KBW,KP)	Value of an individual Blue type-KBW weapon when Blue is on defense in posture KP. (Here KP = 1 or 2 only.)	W
VIBWMN(KBW)	Minimum value of an individual Blue type-KBW weapon.	W
VIBWMX(KBW)	Maximum value of an individual Blue type-KBW weapon.	W
VIRAA(KRA)	Value of a successful Red CAS type-KRA sortie if Red is on attack.	W
VIRAD(KRA)	Value of a successful Red CAS type-KRA sortie if Red is on defense.	W
VIRWAP(KRW,KP)	Value of an individual Red type-KRW weapon when Red is on attack in posture KP. (Here KP = 1 or 2 only.)	W

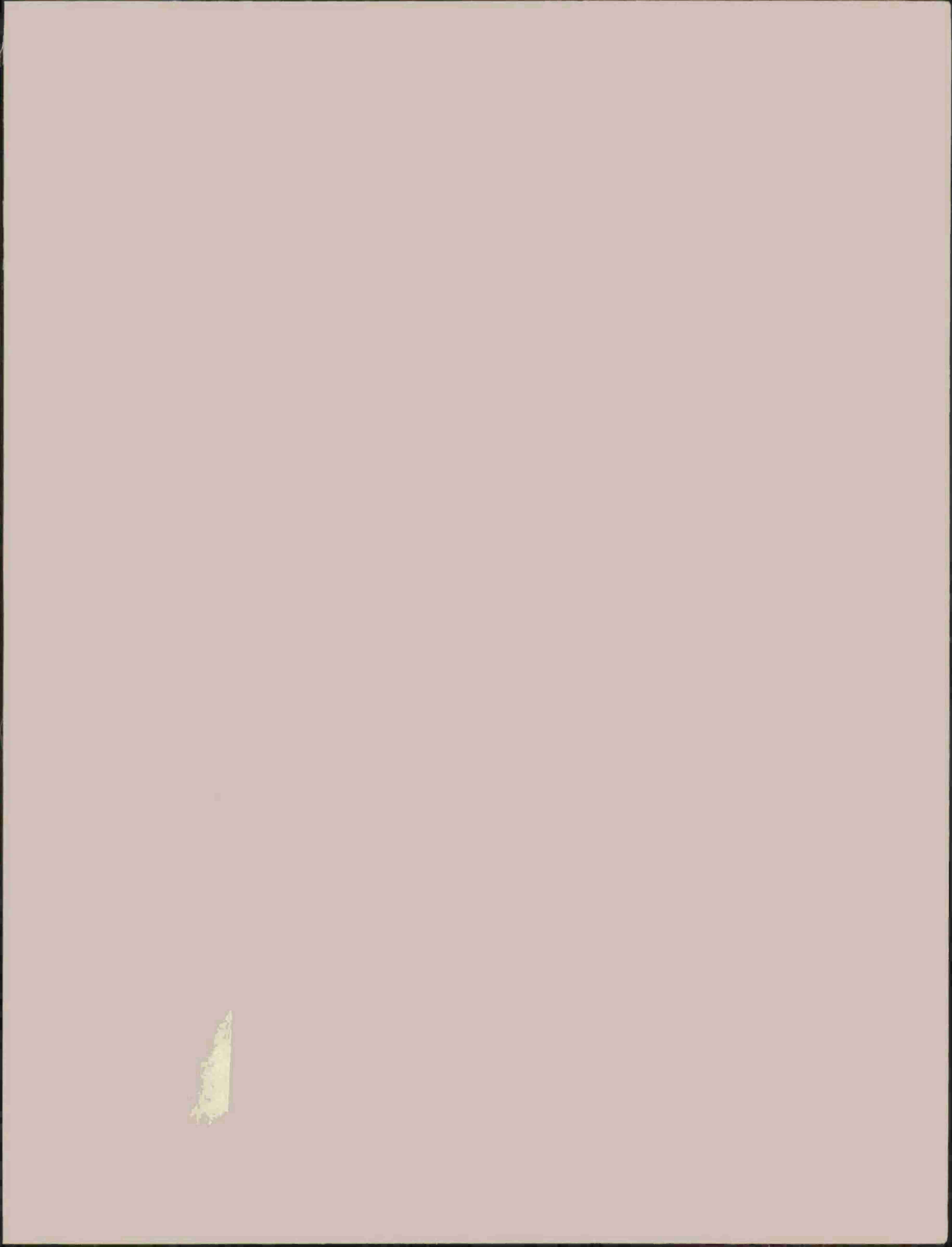| Variable Name	Definition	Type
VIRWDP(KRW,KP)	Value of an individual Red type-KRW weapon when Red is on defense in posture KP. (Here KP = 1 or 2 only.)	W
VIRWMN(KRW)	Minimum value of an individual Red type-KRW weapon.	W
VIRWMX(KRW)	Maximum value of an individual Red type-KRW weapon.	W
VNR	Value needed in all sectors in region.	W
VNS(J)	Value needed in sector J.	W
VR(KRW)	Subroutine eigenvector for value of Red weapons (see EIGENV).	W
VRAAS	Value of Red air forces in sector when Red is on attack.	W
VRAASF(KRA)	Value of each Red type-KRA aircraft against a standard force when Red is on attack.	W
VRADS	Value of Red air forces in sector when Red is on defense.	W
VRADSF(KRA)	Value of each Red type-KRA aircraft against a standard force when Red is on defense.	W
VRAMAB(KRAM,KBW)	Value of a Red type-KRAM air munition on attack against Blue type-KBW targets. (RPTZ,3230)	I
VRAMDB(KRAM,KBW)	Value of a Red type-KRAM air munition on defense against Blue type-KBW targets. (RPTZ,3235)	I
VRAS(J)	Value of Red air forces in sector J.	W
VRGAS	Actual combat value of Red ground forces in the sector considering supply limitations when Red is on attack.	W
VRGDS	Actual combat value of Red ground forces in the sector considering supply limitations when Red is on defense.	W
VRGS(J)	Value of Red ground forces in sector J.	W
VRWABP(KP,KRW,KBW)	Value of an individual Red type-KRW on attack against Blue type-KBW weapons. (KP = 1 indicates postures 1, 3, 4; KP = 2 indicates posture 2). (RPTZ,3240)	I

Variable Name	Definition	Type
VRWASP(KRW,KP)	Value of a Red type-KRW weapon against a standard force when Red is on attack in posture KP. (Here KP = 1 or 2 only.)	W
VRWDBP(KP,KRW,KBW)	Value of an individual Red type KRW weapon on defense against Blue type-KBW weapons. (KP = 1 indicates postures 1, 3, 4; KP = 2 indicates posture 2). (RPTZ,3245)	I
VRWDSP(KRW,KP)	Value of a Red type-KRW weapon against a standard force when Red is on defense in posture KP. (Here KP = 1 or 2 only.)	W
W(KBW)	Working variable used in subroutine EIGENV for calculating eigenvectors for antipotential potential.	W
WBA	Weighted number of Blue aircraft.	W
WBARF(IB)	Weighted number of Blue aircraft on airbase in forward-region IB.	W
WBARR(IB)	Weighted number of Blue aircraft on airbase in rear-region IB.	W
WBAZ	Weighted number of Blue aircraft on COMMZ airbase.	W
WDR(KRW or KRW)	Blue type-KBW weapons or Red type-KRW weapons in all divisions in the region.	W
WFCBSN	Weighting factor for comparing Blue sheltered aircraft to Blue nonsheltered aircraft. (RPAC, 8284)	I
WFCRSN	Weighting factor for comparing Red sheltered aircraft to Red nonsheltered aircraft. (RPAC,8284)	I
WFRBR	Worst force ratio in Blue region.	W
WFRRR	Worst force ratio in Red region.	W
WIDIS(INTS,J)	Width of interval INTS in sector J. (RPTZ,2360)	I
WIDS(J)	Width of sector J in current interval.	W
WIDSNB(J)	Width of sector J in the next interval if Blue is on attack.	W

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Variable Name	Definition	Type
WIDSNR(J)	Width of sector J in the next interval if Red is on attack.	W
WRA	Weighted number of Red aircraft.	W
WRAFR(IR)	Weighted number of Red aircraft on airbase in forward-region IR.	W
WRARR(IR)	Weighted number of Red aircraft on airbase in rear-region IR.	W
WRAZ	Weighted number of Red aircraft on COMMZ airbase.	W
WVIDR(KBD or KRD)	Weapons value of one type-KBD or type-KRD division in the region.	W
WVIDS(KBD or KRD)	Weapons value of one type-KBD or type-KRD division in the region.	W
WVR	Working variable that stands for weapons value in the region--i.e., BAWVR, RAWVR, BDWVR, or RDWVR.	W
WVRS	Weapons value in a region and one of its sectors.	W
WVS	Weapons value in a sector.	W
WVST	Weapons value in all sectors (one side only); total value.	W
YBAEDS(KBD,J)	Yesterday's Blue attack effectiveness (in percent) in a type-KBD division in sector J. Value is based on actual personnel strength over TOE personnel strength.	W
YBAPE	Yesterday's Blue attack percent of effectiveness.	W
YBDEDS(KBD,J)	Yesterday's Blue defense effectiveness in a type-KBD division in sector J. (This percent value is based on actual Blue personnel strength over TOE Blue personnel strength).	W
YBDPE	Yesterday's Blue defense percent of effectiveness.	W
YBPP	Yesterday's Blue percent people (actual over TOE).	W
YBPPDS(KBD,J)	Yesterday's Blue percent people (actual Blue people over TOE Blue people) in a type-KBD division in sector J.	W

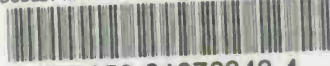| Variable Name	Definition	Type
YBPRA	Yesterday's percent of reorganization for Blue if Blue is on attack today.	W
YBPRD	Yesterday's percent of reorganization for Blue if Blue is on defense today.	W
YRAEDS(KRD,J)	Yesterday's Red attack effectiveness (in percent) in a type-KRD division in sector J. Value is based on actual Red personnel strength over TOE Red personnel strength.	W
YRAPE	Yesterday's Red attack percent of effectiveness.	W
YRDEDS(KRD,J)	Yesterday's Red defense effectiveness value (in percent) in a type-KRD division in sector J. Value is based on actual Red personnel strength.	W
YRDPE	Yesterday's Red defense percent of effectiveness.	W
YRPP	Yesterday's Red percent people (actual over TOE).	W
YRPPDS(KRD,J)	Yesterday's Red percent people (actual Red people over TOE Red people) in a type-KRD division in sector J.	W
YRPRA	Yesterday's percent of reorganization for Red if Red is on attack today.	W
YRPRD	Yesterday's percent of reorganization for Red if Red is on defense today.	W
ZDZ	Supplies the COMMZ demands from the COMMZ.	W
ZNZ	Supplies the COMMZ needs from the COMMZ.	W